CHILD PSYCHOLOGY

for Professional Workers

TEAGARDEN

Justin E. Harlow Jr

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CHILD PSYCHOLOGY
FOR
PROFESSIONAL WORKERS

BY

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TO THE MEMORY OF

MY FATHER AND MOTHER

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PREFACE TO REVISED EDITION

Great changes have taken place in the world and in the lives of all its people since the first edition of this book appeared. These changes make the responsibility of those interested in human life more serious and more important than it has ever been before. One hesitates to think that anything one may write can make any significant contribution to the solution of the many problems of human welfare, but one can, at least, write with live human problems in mind. In that spirit the present revision was undertaken.

Reviewers of the first edition of this book were good enough to say that it had greater possibilities for use by regular college classes than I had claimed for it. This point has been kept in mind in the preparation of the new edition, and it is hoped that not only "professional workers" but college students as well may find something of value within its pages.

The literature of Child Psychology has increased enormously since the first appearance of this book; to the original citations, therefore, most of which have been retained, the revised edition has added nearly 700 references dated since 1940. Additional plates, tables, and figures have been included, as well, in the hope of making the text clearer and more meaningful, and new illustrative material, drawn from my continuing clinical experience, has been added.

Dr. George McKinley read the first three chapters of the revision with great care and made valuable suggestions for their improvement. Dr. Mortimer Cohen was good enough to read and evaluate the pages dealing with blood groups and types. Dr. Davenport Hooker provided reprints of his numerous publications on fetal life. Dr. Julius M. Rogoff discussed his studies in endocrinology with me and gave and lent me reprints which were of great help. To all these colleagues in the University of Pittsburgh, the great gratitude I feel is hereby expressed.

Permission to quote has been secured from the Maternity Center Association; the University of Minnesota Press; D. C. Heath and Company; the Vineland Training School of Vineland, New Jersey; the Commonwealth Fund; and School and Society. Their co-operation is greatly appreciated.

To all publishers, colleagues, and friends mentioned in the Preface to the First Edition, renewed thanks are expressed. To my cousin, Marjorie W. Day, I am indebted for help with this revision. Also, I am particularly grateful to Louise Ebersbach Ritchie, not only for a constant interchange of professional ideas and ideals, but also for help of many kinds in the preparation of this edition. To her go my thanks and my deep appreciation.

Florence M. Teagarden

PREFACE TO FIRST EDITION

One gets so many ideas from one's colleagues and friends that often it is difficult, years later, to identify the source of an idea and to give proper credit to its donor. One such idea, however, I can distinctly identify, and place both chronologically and geographically. A colleague who was also an executive with one of the private social agencies in our city asked if I would give a course on Child Psychology, modified somewhat from the usual course and adapted to the needs of case workers in social agencies. The course was offered the following year and has been given regularly since that time. The students in the course have been, for the most part, social workers, home and school visitors, social workers in training, and public-health nurses. Because of the emphasis on the mental-hygiene point of view, certain ministers, rabbis, and teachers in service have also been members of the class at one time or another.

In the meantime, I have continued clinical psychological service for children, regular graduate courses on Child Psychology, work with both normal and abnormal children, work with parents, and committee activity of one kind or another with social agencies. As a result of these contacts, I have become increasingly conscious of several things. One is that professional workers need to know much about normal children. Another is that they also encounter perforce much that is abnormal in children, and for this they need training. The third is that there has been available no book on Child Psychology that, I felt, answered the needs of these professional workers.

My indebtednesses are many. I wish first, however, to make acknowledgment to Louise Ebersbach, good friend and good case worker. She suggested the idea of writing this book in the first place. She then had to live under the same roof while it was being written. She has read the entire manuscript and has offered suggestions and constructive criticism that have been of inestimable value.

Dr. Davenport Hooker, Head of the Department of Anatomy in the Medical School of the University of Pittsburgh, and Dr. George M. McKinley, Assistant Professor of Biology in the University of Pittsburgh, have read the first three chapters of the manuscript. Their criticisms and suggestions have been gratefully incorporated. Dr.

William T. Root, Dean of the Graduate School and Head of the Department of Psychology in the University of Pittsburgh, has read and evaluated Chapter XII. I am not only grateful to these men for this help, but I am also happy to call them friends.

I wish to express my gratitude to Alberna Frey Brethauer, who typed most of the manuscript and who, since she is familiar with the literature in this field, has been a great help in connection with editorial work as well. To Venita Frey also, I desire to express appreciation. She has helped with the typing, the indexing, and many other details connected with the preparation of the manuscript. Rose Episcopo had a part also in the typing and in certain other details which have made writing possible. To her I am grateful. Elizabeth Laschinger has also given invaluable aid in indexing.

To my friends in social agencies, I am indebted for much that I have learned about social work. Friends and students from the Western Pennsylvania School for the Deaf, the Western Pennsylvania School for the Blind, the Association for the Blind, and the Industrial Home for Crippled Children have also been of more help than they perhaps realize.

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CHAPTER I

HEREDITY

Introduction

We have often heard it said that, if one wishes to rear a worthy child, he must begin with the child's grandparents. The truth implied in this somewhat unscientific statement is obvious. Because so many of the questions pertaining to the children who are encountered by social workers, teachers, nurses, and clinicians involve superstitions, assumptions, queries, or facts regarding *heredity,* it may be well to begin our consideration of *child psychology* at that point. Social workers frequently work with families which for successive generations have been carried on relief rolls or as case-work clients. Serious consideration of the time and money, both public and private, expended upon such families raises provocative questions as to sterilization, institutionalization, possibilities of intensive case work, and the like. Teachers are constantly faced with the problem of more than one slow-learning child in a family. Always in such cases there is the danger, on the one hand, that a given child in the family is being unjustly branded by the bad academic reputation of a sibling. On the other hand, if a child *is* seriously slow or defective, either by heredity or otherwise, then in all humanity his weaknesses must be recognized and adequate individual provision must be made for him. Nurses and physicians meet problems of disease and constitutional weakness which they could handle more intelligently if light were thrown upon the possible role of heredity as a factor in their production. Unfortunately, present-day studies of genetics do not enable us to answer all the questions which arise in the intricate phenomena of child and family life. Many of our questions are still unanswered. Nevertheless, it would appear that anyone who aspires to a professional point of view in regard to human affairs must acquaint himself with sufficient of the painstaking work of the geneticists to avoid bizarre assumptions and unwarranted conclusions.

The processes by which "like begets like" are so involved that it is impossible for any but a professional in the field to have more than a beginner's concept of them. Even a relatively small amount of study will convince anyone of the complexity and the nicety of one of nature's most intricate and most beautiful processes. The following discussion presents facts in an enormously simplified fashion. Many of the statements would be given more exactly and with greater refinement by a geneticist. Certain principles, however, must be made available to those individuals who by paradox might be called "professional laymen." Presumably, social workers, teachers, nurses, physicians, and clinicians are "professional" within their own fields, but certainly they are also "laymen" in the fields of heredity, genetics, and eugenics.

Sex Cells

One of the characteristics of maleness is that the organism, whether it be plant, animal, or man, produces within the reproductive organs of its body male cells. These are known as *sperm cells.* Similarly, one of the requisites of a female, be it plant, animal, or human, is that she produce within her reproductive organs eggs, or *ova.* These male and female germ cells are essentially the means by which heredity becomes possible. As is true of all cells everywhere in the body, each germ cell contains a *cell wall* which surrounds the *cytoplasm.* Within the cytoplasm is the *nucleus.* The exact function of the cytoplasm is not known, although several hypotheses are at present under investigation. The nucleus is sometimes referred to as the life-giving part of the cell, and certainly in the case of sex cells it contains the more essential mechanisms by which heredity occurs. Within the nucleus of every cell of the body, both sex and somatic cells, there lies a twisted mass, or skein, of fibers. When the cells are treated chemically so that they may be examined in laboratories, this mass of fibers takes on color from the fixative solutions that are used. Because of the fact that it becomes colored, or chromatic, it has been given the name of *chromatin.* Much of the time the chromatin matter remains in its massed form. At certain times, however, it separates and threads out into fibers called *chromosomes.* It is now a well-established fact that the chromatin material of every cell throughout the body of every member of a given species organizes itself into a definite and characteristic number of chromosomes. Newman says, (60)* for example:

> A certain species of crayfish has 200 chromosomes, one species of water flea has 168, a species of moth has 62, man has 48, a species of salamander has 28, the pine tree has 24, maize has 20, Lamarck's evening primrose has 14,

---

* Numbers in parentheses refer to bibliography at end of chapter.

Drosophila (the classic fruit fly) has eight, one variety of the maw-worm of the horse has two.[1]

It should be noted that each of the numbers given above is an even number. Instead of saying that man, for example, has 48 chromosomes, we might better say he has 24 *pairs* of chromosomes. By a process of which we shall speak later, one member of each pair of chromosomes has come from the paternal parent and the other member of each pair has come from the maternal parent.

Within recent years it has also been ascertained that each chromosome contains *genes* which lie in a regular order within the chromosome like beads on a string. It is now agreed by geneticists that the genes preside over the handing on of different hereditary characters. Although the genes have only recently been observed microscopically, it appears from experimental evidence that they are the actual bearers of hereditary traits. The genes may and perhaps usually do affect more than one character of an individual, but the intricate way in which they perform still belongs to the field of the geneticist. Suffice it to say that every hereditary trait either is at present or probably someday will be actually explainable on the basis of the action of specific genes or groups of genes within the chromosomes.

Maturation of Sex Cells

Because our present concern in the mechanics of heredity is necessarily limited, we shall confine ourselves to a very simple discussion of the behavior of chromosomes within the male and female sex cells. For the sake of simplicity, let us suppose that we are dealing with a sperm cell whose chromatin characteristically divides into only six chromosomes, or three pairs of chromosomes. Then the female sex cell of the same species would likewise divide at appropriate times into three pairs of chromosomes. We must now consider a process which is unique to sex cells, never occurring in the body cells. This process is called *maturation*. To quote Newman (60) again:

> While the body of an individual is undergoing development, the germ cells are relatively dormant, but there always comes a time (we may call it the period of sexual maturity) when something takes place in the germ cells that is never duplicated in body cells; they undergo a process of chromosome reduction.[2]

---

[1] From Horatio Hackett Newman, *The Nature of the World and of Man*, by permission of the University of Chicago Press.

[2] From Horatio Hackett Newman, *The Nature of the World and of Man*, by permission of the University of Chicago Press.

Let us return to our hypothetical example of a species which divides into three pairs of chromosomes.

As we said before, every cell within the body of a given species contains the same number of chromosomes. In the case of higher animals and of man, every new individual gets its start into the world by the union of a sex cell contributed by the male parent with a sex cell contributed by the female parent. Now, if these two cells were to unite while each was bearing its complete equipment of chromosomes, the fertilized egg, or potential new individual, would have twice the regular number, and soon the family pattern would be destroyed. To prevent this disturbance of the pattern, a germ cell, before it can fertilize or be fertilized, as the case may be, must go through the process referred to above—namely, maturation, or chromosome reduction. In other words, before fertilization can take place, both the female and the male sex cell must lose one member of each of its pairs of chromosomes and start into the fertilizing process as a *haploid cell*—that is, a cell with one-half its usual number of chromosomes.

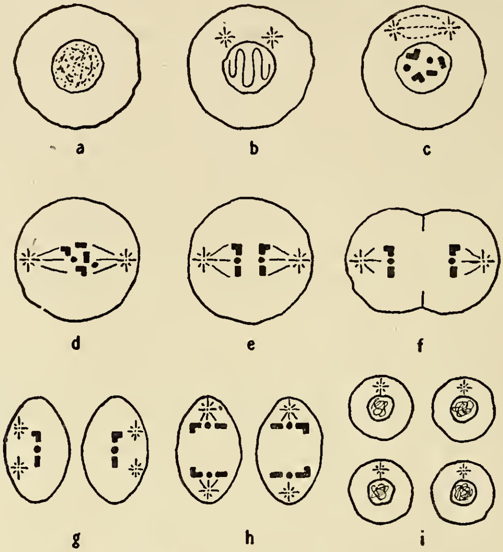

FIGURE 1—MATURATION OF SPERM.

Our purpose in discussing the process of maturation in this very condensed fashion is to make clear to our "professional laymen" the reason why a human being gets his hereditary background equally from his father and his mother. Now, this does not mean that every single trait has come half and half from the two parents. It does mean, however, that such statements as "the child inherits more from his mother than from his father" (or the reverse) are entirely erroneous. We shall present only such of the more simple and easily understood facts as will show the falsity of such statements. In passing, it is interesting to note that according to uninformed persons the preponderance of inheritance is said to be either from the father *or* the mother, depending upon the prejudice and the misinformation of the speaker.

The illustrations on pages 4 and 6 are intended to show, in a diagrammatic way, some of the details of maturation (Figure 1). By this process, our hypothetical sperm cell starts with its chromatin material threading out into a long strand (Figure 1b). This strand finally breaks up into six chromosomes (Figure 1c). In a rough way, it may be said that two of these fibers are about the same size and shape. One member of the pair came originally from the previous male parent and one from the previous female parent. Two others of these six chromosomes are relatively alike in size and shape, and here again one came from the male and one from the female parent of the previous generation. The same is true of the remaining pair of chromosomes. These pairs of sperm chromosomes may easily be seen in Figures 1c and 1d. The similar half pairs of chromosomes line up together (Figure 1e) and then pull apart toward opposite poles of the cell (Figures 1f and 1g). Indeed, it looks as if they were *being pulled* apart, as in fact they probably are. Figure 1f shows the beginning of a division which in time separates the cytoplasm into two new cells. By the time the stage represented by Figure 1g is reached, we see two germ cells, each of which is *haploid* because it contains three half pairs of chromosomes instead of three whole pairs. Preparation for fertilization, however, does not stop just yet. It will be seen that each of these two haploid cells begins a mitotic division, as indicated in Figure 1h. These two divisions are called *secondary spermatocytes.* In Figure 1h, each of the half pairs of chromosomes from Figure 1g has split, and the parts are pulled toward the opposite poles of 1h. Half the chromosomes in each new cell are maternally derived and half are paternally derived. Which is which, so far as is known, is a matter of chance. Each of the secondary spermatocytes in 1h further divides until in Figure 1i we have four *spermatids.* The above description is a very sketchy presentation of a general situation and the diagram makes no attempt to show the true four-strand or tetrad nature of this maturation.

Any one of these four spermatids is now capable of fertilizing a female cell which has gone through a similar reduction process. These haploid cells are now known as *gametes,* a term that, by derivation, means "marrying cells." Any one of the four, likewise, is capable of passing on to posterity all the essentials. However, it can also easily be seen that some chromosomes and genes are now missing in each gamete, and therefore some particular hereditary traits will not be handed on. To illustrate, let us suppose that one gamete from Figure 1i fertilizes one ovum, and at the same time another gamete from Figure 1i fertilizes another ovum. Fraternal twins will be the result. They *cannot* be exactly alike.

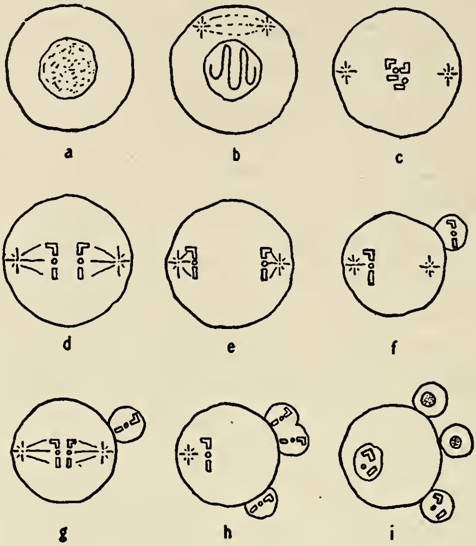

Figure 2—Maturation of Ovum.

Figure 2 illustrates diagrammatically the maturation of the egg, or female germ cell. To simplify matters, we shall assume that this cell is from the same species as illustrated above and therefore will have three pairs of chromosomes. These can be seen in Figure 2c. As the cell grows, division occurs, as in Figures 2d and 2e. In Figure 2f, one of each pair of chromosomes in the ovum is pushed outside the cell wall. In Figures 2g, h, and i, multiplication of these so-called *polar bodies* is shown, but such features can really be disregarded for the purpose of our present interest. The parts with which we are now concerned are those still retained within the original cell wall. In Figure 2f, some paternally derived chromosomes and some maternally derived chromosomes are so retained. The other member of each pair has been pushed out into the polar bodies. It becomes abortive, and has nothing further to do with reproduction or heredity. These polar bodies of Figures 2f, g, and h, as well as three of the four segments of Figure 1i, are examples of nature's prodigality and waste. The large cell to which the three polar bodies are still attached (Figure 2i) is now a gamete. It contains half the characteristic number of chromosomes and is capable of being fertilized.

Fertilization

In order to illustrate how a new individual originates from the mating of two parents, we shall take one segment from Figure 1i and the part contained within the cell wall in Figure 2i. So far as these two particular gametes are concerned, they can now pass on to the new individual about to be created only the trait potentialities contained within the genes and the chromosomes which each still retains. Whatever chromatin material was given off into the other segments is lost so far as the heredity of the present fertilization is concerned.

In Figures 1 and 2, no attempt has been made to indicate the actual form of the two sex cells. Figure 3 indicates diagrammatically something of the differences, in size and shape, between the male and female germ cells. The complete sperm cell is quite microscopic. It nevertheless is provided with a delicate and beautifully adapted size, form, and chemical composition for finding and attaching itself to the female gamete. The female gamete is considerably larger than the sperm cell. This is because it contains, in addition to the all-important chromosomes, equally important yolk or food material for the nourishment of the new individual that will be formed, provided the sperm cell finds and penetrates the wall of an ovum. (See Figure 3, page 8.)

The first stages in the fertilization of the ovum by the sperm are shown in Figure 3. The first diagram in Figure 3 shows the egg cell, lacking detail, as it was in i of Figure 2 (minus the polar bodies which by this time have become aborted). It also shows the tiny sperm cell attaching itself to the outer wall of the ovum. This sperm cell is the same as the one whose nucleus alone we have been considering in Figure 1i. Figure 3b shows that the head of the sperm, with its haploid number of chromosomes (not shown in detail), has succeeded in penetrating the wall of the egg cell. Figure 3c shows that the two nuclei, male and female, are approaching each other. In order to indicate that one member of each pair of chromosomes has been maternally derived and one member of each has been paternally derived, we shall assume that the white chromosomes have come from the female gamete and the black chromosomes from the male gamete.

Eventually the membranes surrounding the two nuclei break down and allow the nuclei to merge. When their chromatin material has become fused, it is evident that in the mixture there will once again be three complete pairs of chromosomes. Thus the fertilized ovum is back to the original number of chromosomes and is ready to begin a process of growth and division which we shall discuss in Chapter III.

In the case of the human being, growth and division make possible the change of a microscopic bit of protoplasm into an enormously specialized infant usually weighing, at birth, from seven to eight or nine pounds. This process of growth, however, which goes on within the body of the mother, we shall discuss in another chapter devoted to the birth of the baby.

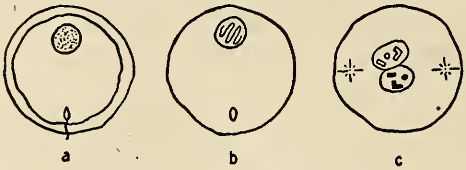

FIGURE 3—FERTILIZATION.

Mendelism

Professional persons who attempt to do extensive reading along the lines of their professional interests need to know, in a general way, many things that they may or may not actually use in the pursuance of their duties. The contribution of Mendel to the field of heredity offers such an example. As social workers, teachers, or nurses, we may have little control over the marriages of our clients, pupils, or patients. Nor can we, to any considerable degree, regulate the offspring of such marriages. That does not, however, prevent our being interested in such questions. Nor should it deter us in our desire to be able to read some of the scientific literature intelligently.

Gregor Johann Mendel (1822-1884) in his monastery garden in Austria experimented in the raising and crossing of different varieties of peas. His attention was caught by the fact that the offspring of these varieties were apparently not "hit and miss," but that they followed certain definite hereditary patterns. For example, when he crossed a tall strain of pea with a dwarf strain, he found that the next generation were all tall. Likewise, when he crossed a green strain with a yellow strain, he found that the next generation were all yellow. The experiments demonstrated to Mendel that some traits apparently had more potency in stamping themselves on the offspring than others—as, for example, tallness and yellowness. To these traits he gave the name *dominant.* To the opposing traits of shortness and greenness he gave the name *recessive* because, in the presence of the dominant trait, they tended to recede from the descendent picture. Mendel further discovered, however, that the recessive traits did not disappear from the picture entirely, for he found when he crossed the hybrid *offspring,* which to all appearances were tall or yellow, with other hybrids like themselves, *their* offspring began to show the recessive trait again.

It may be well for us to stop just at this point to speak a little further about recessive traits, in order to avoid two possible confusions. Whenever we are considering a pair of opposing traits, such as greenness and yellowness, one of which is a dominant and the other a recessive, we speak of the pair as *allelomorphs.* What does it mean to say that one of a pair of allelomorphs is recessive? It simply means that in the presence of the other allelomorph it will not be apparent. It does not mean at all that the trait is necessarily undesirable or peculiar. We have merely to look over the following list of a few selected dominants and the succeeding list of a few selected recessives to see that either a dominant or a recessive trait may be undesirable. We could easily give similar lists of desirable dominants and desirable recessives. Downing (60, Chapter 14) cites brachydactyly (thumblike fingers), hexadactyly (six fingers or toes), lobster-claw (hand deformity), and congenital stationary night blindness as human dominants. On the other hand, he cites albinism, left-handedness, deaf-mutism, congenital cataract, and sensitive asthma as recessives. It is beside the point to go into detail here in regard to these or other traits that may act at times as partial dominants or recessives. We are simply making the point that neither dominance nor recessiveness implies biological excellence.

One other point may need clarification. As we shall see later, there may be produced an individual from whose germ plasm all genes for a particular dominant trait have been lost. In such a case, the individual receives from both parents the gene for the recessive trait. He is spoken of as a recessive individual in regard to that trait, even though, in such a case, the recessive trait does show.

Let us examine Mendel's results in the light of knowledge about germ cells derived since his day. We have seen that each sperm cell has several pairs of chromosomes. Let us, for the sake of simplicity, confine ourselves to one pair for the time being. We have also seen that, of any one pair of chromosomes, one chromosome has come from the maternal and one from the paternal ancestry. Now, let us take also one pair of chromosomes, the corresponding pair, from the ovum. Similarly, one of each of these has come from its maternal and one from its paternal line. We have then, for the purposes of our illustration, one pair of chromosomes from the male and the corresponding pair from the female of the species. Let us assume further that each of these, the male and the female, has come from *pure stock* in regard to some trait—let us say color. Let us suppose that all the antecedents of the sperm chromosome in our illustration had been yellow, and similarly with the ovum. We have seen previously how, before this sperm cell can fertilize the ovum, it must divide up its pairs of chromosomes and discard one member of each pair. Likewise, the reduction process must occur in the ovum. To speak popularly, each of these germ cells throws away half of its ancestral possibilities. Now, if both lines of ancestry had contributed yellowness to our hypothetical sperm cell, it would not matter which member of the chromosome pair was cast off. Yellow potentialities would be thrown away, but yellow potentialities would likewise be saved to pass on. Similarly, the ovum, in the process of maturation, would throw away one chromosome capable of contributing yellow, but it would also save for posterity one contributing yellow.

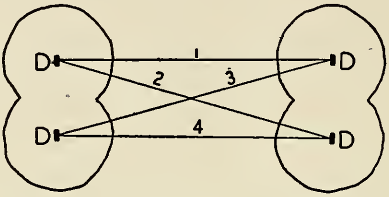

Figure 4—The Four Possible Fertilizations in the First Filial Generation (F_1) Resulting from the Mating of Two Pure Similar Stocks.

This may be illustrated in Figure 4, in which to the left, let us say, is a pair of chromosomes in a sperm cell before maturation. It still contains two chromosomes bearing the possibility of passing on yellow. Since yellow is dominant, we shall indicate that this sperm cell is DD, meaning thereby that each of these two chromosomes bears the dominant trait. Let us allow the figure on the right to represent a corresponding pair of chromosomes in an ovum before maturation. It similarly is a DD as regards yellow. Before fertilization between these two can occur, each will have to lose one of its chromosomes. Chance, so far as we know, will determine which. The connecting lines are intended to show diagrammatically what kind of offspring would result from any one of the four possible fertilizations. The numbers on the diagram are purely for purposes of visual convenience. It can be seen that all the offspring from this pair will be *pure dominant*—that is, pure yellow.

Now, let us change the situation slightly (Figure 5) to see the results of crossing a *pure dominant* (DD)—that is, one containing nothing but the dominant strain from both lines of its ancestry—with a *pure recessive* (dd), which has only the recessive trait in its family tree. These two germ cells, before fertilization, will go through the usual reduction phase. Something will be thrown away, so to speak, and what is kept to be handed on to the next generation through fertilization will be one of four possibilities.

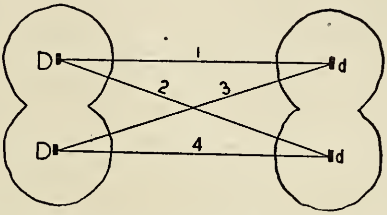

Figure 5—The Four Possible Fertilizations in the First Filial Generation (F_1) Resulting from the Crossing of Two Pure but Unlike Stocks.

In Figure 5, it will be seen that no matter which plan fertilization takes, the offspring will be a Dd offspring, or a *hybrid*. That is to say, any possible combination will result in a new organism which has received a dominant-bearing chromosome from one parent and a recessive-bearing one from the other parent. These offspring may be designated with a capital D and a small d to indicate that, to use a figure of speech, the recessive trait will be covered up and will not show. By definition, the dominant trait is the one that *will* show if it is present at all, while the recessive one will, *so far as appearances go,* not be present. Subsequent matings, however, will prove that appearances in such cases are deceiving and that the trait may not have been lost but may only be covered over.

Let us illustrate the subsequent behavior of recessive traits in Figure 6. Suppose we take two individuals that have been produced by such matings as that just described—in other words, a Dd male and a Dd female. Before the sex cells can go through the fertilizing process, each must reduce its chromatin. Here, likewise, there are four possibilities as regards the particular chromosome pairs under consideration. If the first possible pairing occurs, the offspring will get D from both parents and will therefore be a DD like one of its grandparents. If the possibility marked "2" occurs, the resulting offspring will get D from one parent and d from the other and be a Dd individual, like both its immediate parents. If the third possibility happens to take place, this offspring will also be a Dd. If the fourth possibility becomes the actuality, the offspring will be a dd. In the latter case, since there is no dominant trait present, the recessive trait will have to show. To summarize the mating of two hybrids, then, suppose that thousands of such could be made to occur, as they can easily with plant and animal forms, in a relatively short time. On the average, as can be seen above, about one-fourth of the offspring will be pure dominant (DD) and will be incapable of ever handing on the recessive trait. It is gone from them completely. Two one-fourths, or one-half, of the offspring will be Dd's. They will *look dominant.* In other words, they will to all appearances have the dominant trait. They will also, however, retain the possibility of handing on the recessive trait to their descendants. It is still in their germ plasm, even though it does not show. The remaining one-fourth, approximately, will be dd individuals. Not only will they show the recessive trait, but it is the only one, in this particular, that they will ever pass on. The dominant trait is lost from their germ plasm. It can now be seen that any individual that *shows* the recessive trait must be dd as regards that trait. That is to say, he must have received it from both lines, since, if he had received the *dominant* from either line, *it* would have shown.

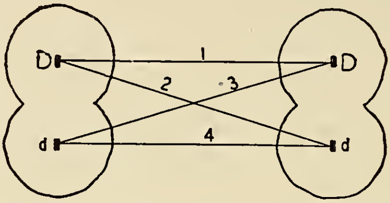

Figure 6—The Four Possible Fertilizations in the Second Filial Generation (F_2) Resulting from the Crossing of Two Hybrids.

Now, there are many complications that have evolved as geneticists have tried out the Mendelian principles. For example, there is the very complex question as to what happens when we cross two individuals, keeping in mind, not *one* trait as we have just done, but *several* traits, such as tallness or shortness, *and* smoothness or wrinkledness, *and* greenness or yellowness. We cannot here go into the resulting ratios, and need not for our purposes. We must remember also, as Newman (60) says:

> The unit character idea of Mendel implied that each character in the organism was dependent upon a single determiner in the germ cell. The modern idea is that each character may be due to the interaction of two or many independently inherited factors.[3]

In fact, geneticists now always speak of *unit factors.*

It is known now also that, instead of lying side by side, a pair of chromosomes may sometimes come to lie in a kind of *X* position. In maturation, then, the splitting will occur through this *X*. This means that a new alignment of genes will result. This is known as *crossing-over* and explains some hereditary transmissions that were inexplicable before chromosomes and genes had been observed microscopically.

Modern genetics is largely built around data concerning the *linkage* of factors and their subsequent distribution. It is also now known that two or more factors or two or more genes in different pairs of chromosomes may produce much the same kind of effect. This is known as the *multiple factor* theory and accounts for what formerly was thought of as *blending inheritance.* Modern geneticists also know a great deal about what they call *incomplete dominance.*

These newer applications and implications do not in any way discredit the work of Mendel. On the contrary, its extreme significance is more appreciated today than ever before. To illustrate, it was formerly thought that probably certain examples of inheritance could never be explained by Mendelian principles. Geneticists felt these cases probably needed some other explanation. Now, however, with expansion of Mendelian principles through knowledge gained from subsequent research, it is thought that all inheritance is Mendelian. Many of these latter-day principles Mendel would probably have discovered or helped to discover had he lived long enough to do so. The only regret and shame is that he did not receive the credit due him *while* he lived.

Human Genetics

The teacher, the social worker, or the nurse will probably be helped by this very simple account of Mendel's contribution, more by the mistaken notions that it may help him or her to *avoid,* rather than by any direct professional use that he will make of the information. It should help, for example, to keep us from jumping to the conclusion that all children of feeble-minded parents will be as feeble-minded as their parents. We must always bear in mind that intelligence by its very nature is an enormously *complicated function* which does not depend upon one gene. An intelligent person must *remember, judge, reason, associate, compare, analyze, synthesize,* and perform many, many other mental activities. He may be somewhat better equipped by nature for some of these functions than for others. We certainly, then, must not speak of intelligence as though it were a *unit* that either is or is not handed on. There is a serious question as to whether the same may not be said for most feeble-mindedness. Although it may be true that certain types of feeble-mindedness may be caused by the presence or absence of a particular determiner, it is very doubtful that this is true of most of the feeble-mindedness that we encounter. One probably, therefore, needs to be very careful in speaking of any feeble-mindedness as a dominant or a recessive trait. Only the geneticist who is trained both in his own field and in the field of psychometrics is entitled to an opinion on such matters.

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[3] From Horatio Hackett Newman, *The Nature of the World and of Man,* by permission of the University of Chicago Press.

In subsequent places throughout our discussion, we shall refer to certain diseases as being inherited, at least in tendency; as dominant or recessive, or partially so. Tendencies toward the contraction of certain diseases appear to be definitely inherited. Even in laboratory colonies of mice, epidemics that have been deliberately introduced will "rage with violence or die out, depending upon hereditary susceptibility" (43). Data that are of great interest to those concerned with human welfare are accumulating on this subject. To date, however, it must be said that the application of Mendelism to fruit flies is infinitely better known than is its application to the human race. The slowly accumulating data from human family histories will help to change this condition eventually. For this reason, all of us who are concerned about improving human stocks should certainly be actively interested in the work of the Eugenics Laboratory at Cold Spring Harbor, Long Island, New York, which collects data on family histories. The laboratory will send, upon application, especially prepared blanks for the recording of family lines. It is needless to say that for these, as well as for many other reasons, social workers and nurses will have a professional interest in helping to enforce the law that requires the recording of all births in the appropriate bureau of vital statistics.

The intention in this simple presentation has been to show: (1) that the passing on of hereditary traits depends upon the chromosomes and their genes; (2) that geneticists know somewhat in detail the relation between certain traits and certain genes or combinations of genes; (3) that the human male and the female parent contribute equally to the hereditary traits of any one given offspring; (4) that whatever is actually hereditary within an individual must have become a part of his equipment at the time of conception; and (5) that *human behavior* is so complex that no simple genetic formula can be applied for predictive purposes. For example, students often ask whether irascible temper, migratory behavior, athletic prowess, slowness of reaction, and many such behaviors are inherited. The answer of course is that *behavior as a function* is not inherited. On the other hand, insofar as behavior or function can be shown to emerge from a peculiarity of *structure,* such as nerve cells, bones, sense organs, or the like, inheritance may be involved. One might say, in other words, that we inherit structure rather than function or behavior.

Hereditary Resemblance

The similarities that appear to be due to inheritance always offer a fascinating field of observation to the novice and a fruitful source of research to the professional investigator. Everyday observation shows that there are differing degrees of hereditary resemblances. All children of the same parents are not alike; neither are they equally like their parents. A casual observation of these differences with equally thoughtless comments upon them is often the source of great emotional disturbance to children. "Where did you get that black-haired stray?" —made as a would-be facetious remark to a family of blondes—can easily produce needless wonder and anxiety to the particular child concerned. Such comments are no doubt often the source of the *foster-child phantasy* indulged in by many children and of which we shall speak in a subsequent chapter.

Observation readily shows that the farther removed the degree of relationship, the less is the resemblance. This does not, of course, negate the fact that occasionally one will see a striking resemblance between a child and a somewhat remote relative. Various attempts to measure the degree of similarity between differing degrees of kinship have been made. An evaluation of the statistical measures used is not in order at this point. Table I from Wingfield (86) gives a summary of these amounts of resemblance. Such comparisons from other sources may differ slightly from these figures at certain places, but in the main they agree surprisingly. The coefficient of correlation, it will be remembered, is a figure derived by a mathematical formula. It indicates the amount of resemblance or the amount of dependence of two factors. The nearer to unity or 1.00, the greater is the amount of resemblance.

TABLE I

COEFFICIENTS OF CORRELATION FOR INTELLECTUAL RESEMBLANCE AMONG GROUPS EXHIBITING DIFFERENT DEGREES OF GENETIC RELATIONSHIP [4]

Group	*r*
Physically identical twins	.90
Like-sex twins	.82
Fraternal twins	.70
Unlike-sex twins	.59
Siblings	.50
Parent and child	.31
Cousins	.27
Grandparent and grandchild	.16
Unrelated children	.00

[4] From A. H. Wingfield, *Twins and Orphans*, by special permission of J. M. Dent, publishers.

Twins

Twins and other multiple births furnish interesting material for the study of heredity. According to Hellin's Law, twins occur in about 1 out of 85 births; triplets in 1 out of 85^2; quadruplets in 1 out of 85^3; and quintuplets in 1 out of 85^4, et cetera.* Just why this is so remains a mystery, but the fact is that mass data agree with these figures remarkably. In the United States, for example, about 1 birth out of every 88 is a twin birth.

Within recent years, biologists, geneticists, and other students interested in the matter have made elaborate studies of twins. These studies have been peculiarly useful because they allow for a measurement of two degrees of relationship. That is to say, there are two distinct kinds of twins. (See Figure 7.) One kind of twin represents the closest degree of kinship that it is possible for two distinctly separated individuals to have. These twins are known as *similar, duplicate, monozygotic, identical, uniovular, homologous,* or *monochorionic* twins. They are produced from a single ovum which has been fertilized by a single sperm. The fertilized ovum has in the course of its development, at some stage, divided into two parts, thus making possible the formation of two individuals rather than one. Why this occurs is not definitely understood. Such twins must of necessity be of the same sex, since sex is determined at the time of conception. This point will be discussed somewhat further in a subsequent chapter.

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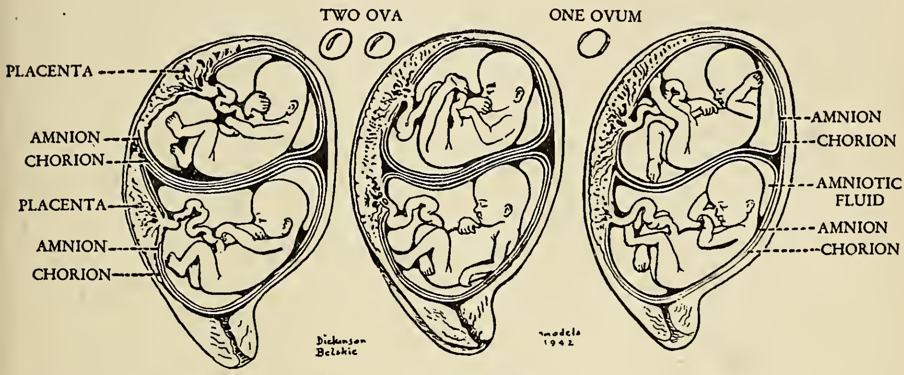
* The superscripts refer to the second, third, and fourth powers, respectively, of the number 85.

All like-sexed twins are not monozygotic twins, however. Twins resulting from two conceptions occurring at about the same time may or may not be of the same sex in just the same way that siblings who are not twins are or are not of similar sex. (The liberation of more than one egg at a time, resulting in the birth of fraternal twins, is in itself a heritable trait, according to MacArthur and Ford in reference 5.) Monozygotic twins, however, are *always* like-sexed. There are several criteria for determining whether twins are fraternal or identical. In the main, the blood supply of monozygotic twins is confluent in the placenta, a condition that is usually not the case with dissimilar twins. Commonality of foetal membrane is often used as a criterion of identity. Insofar as there may be any question on this point, it is not the business of the psychologist to determine the answer. There are difficulties in determining identity in this fashion for the following reasons: sometimes membranes are mutilated at the time of delivery to such an extent that exact examination is rendered impossible; sometimes two separate membranes fuse in such a way as to make determination impossible; in the case of twins lacking authenti-



FRATERNAL TWINS
Two-Egg Twins
Two Placentas
Each Fetus With Two Sacs
Amnion Within Chorion
Sex May Be Different

FRATERNAL TWINS
Two-Egg Twins
The Two Placentas
Have Merged: Each Fetus
Has A Double Sac
Sex May Be Different

IDENTICAL TWINS
One-Egg Twins
Single Placenta
Each Fetus Has Inner
Sac But Outer Sac Single
Sex Must Be Same

From Birth Atlas, *by permission of The Maternity Center Association, New York.*

FIGURE 7—TWINS.

cated records of birth conditions, evidence on this point may never be attainable. Some European countries, however, include data on foetal membranes along with the birth records submitted by the obstetrician. For those interested in more detailed methods of identifying monozygotic twins, reference should be made to Newman (58), Blatz et al (5), and Rife (66), cited in the bibliography at the end of this chapter.

Fraternal twins result from the fertilization of two separate ova by two separate sperm cells. In rare cases, such twins have even been known to have had different fathers. Wiener (83) tells of two white mothers, each of whom had twins. Each twin pair consisted of one white and one mulatto child. The previous history of these women, showing sex relations with both white and Negro men, explains the phenomena. A recent newspaper article reports the birth in the Pennsylvania Hospital of fraternal twins developed in and delivered from two distinct uteri and two distinct birth canals in a mother. Fraternal twins develop in separate fetal membranes. They may or may not be of the same sex, and in many cases they resemble each other little, if any, more than ordinary brothers and sisters. The fact of the matter is that they have nothing in common between themselves that ordinary siblings do not have—except nine months of common environment in utero, plus whatever may be more common in environment after birth because of their similar age.

Occasionally in the twinning process, nature does curious things. For reasons not even slightly understood, one of a pair of twins may become abortive and become invaginated within the body of the other twin. Such a *teratoma* may contain fetal remains, such as teeth, hair, and the like. The teratoma may not be discovered until relatively late in the life of the living twin, who may be diagnosed as having a tumor. Operation, however, may show the tumor to be a teratoma. Medical authorities believe that there may also be autochthonous teratomata, which may not have been formed by their inclusion into another body. Double monsters (cephalothoracopagus), incomplete one-egg twins, illustrate another type of deviation in the twinning process.

All studies on identical twins have described amazing similarities. Gesell (28) cites an interesting example found by MacFarlan. The hearing of middle-aged twin sisters was tested by the use of an audiometer. A very marked resemblance was noted. Pitch discrimination throughout the entire pitch range was almost exactly alike. Other references given at the end of this chapter will enable the student interested in more recent studies on twins to pursue the matter further.

Special reference must be made, however, to valuable studies on identical twins reared apart. Such studies have been made by Müller (49), Newman (53), Lange (39), and Hirsch (32). Müller is perhaps the first to have administered psychological tests in such cases. In the instance of his pair of identical twins, separation had occurred at the age of two weeks. The twins were examined at the age of 33. In the meantime, their environments had been extremely different. Popenoe (63), who first reported on these twins, says that they were very similar in hair color and texture, height, and intellectuality. They even claimed to have had similar previous illnesses that had occurred almost simultaneously. Their educational careers were very different, since one had completed high school, whereas the other had not reached the sixth grade. At the age of 33, they were given the Army Alpha and the Otis Advanced Intelligence Tests. Their scores on these two tests were almost identical.

Still another study of identical twins should be noted. This is Johannes Lange's (39) report on criminal twins. After searching prisons, he found 30 pairs, both alive and of the same sex, at least one of whom had had a criminal record. Examination showed that 17 pairs were fraternal twins and 13 pairs were identical. Lange further classified as *concordant* those pairs of whom both had been imprisoned and as *discordant* those of whom only one had a prison record. Of the monozygotic pairs, 10 were concordant and 3 were discordant; of the dizygotic pairs, 2 were concordant and 15 were discordant. In other words, so far as prison records are an indication, the identical twins were more alike than the fraternal twins. In crime, the former behaved quite similarly, while the latter reacted very differently, the one from the other. Among the *causes* of the criminal careers of the twins studied, Lange concludes that "inherited tendencies play a preponderant part." This is an interesting contrast to the point of view expressed by many sociologists and other "environmentalists." Lange also shows that in emotions, physique, intellect, and general behavior, the monozygotic, concordant twins were much more nearly alike than the monozygotic discordant twins.

In a study made in Holland by Legras (40), data are given on four pairs of monozygotic and five pairs of dizygotic twins. Of the former, both members of every pair were reported as criminal, and of the latter only one member of each pair was so reported. Rosanoff, Handy, and Rosanoff (69) have some figures on criminality, juvenile delinquency, and behavior problems in both monozygotic and dizygotic twins. Their findings, as shown in Table II, are in essential agreement with those of both Lange and Legras. Such studies cannot but impress one with the amazing similarity in identical twins, even when environment has differed enormously. A 1941 study by Rosanoff, Handy, and Plesset (70) gives data on delinquency and criminality in 409 pairs of twins.

Perhaps the most numerous and most exhaustive studies of twins are those made by Newman and his collaborators (51 to 59). Newman, Freeman, and Holzinger (61) report on 50 pairs of identical twins and 50 pairs of fraternal twins (all pairs raised together) and 19 pairs of identical twins who had been separated and reared apart. Statistical analyses of these twins show that physical traits are least influenced by environment; scores on ability and achievement tests are more affected; and personality and temperament scores are most influenced by environment. A twentieth case of identical twins reared apart is reported in (19). This pair of twins showed a higher degree of similarity than any of the other pairs previously studied, the similarity being greater in physical measurements and less in mental and temperamental measurements. Newman concludes that marked differences between separated identical twins, when they do occur, are the result of "thresholds of influence" and that "unless a certain threshold of difference in environment is reached, the organisms do not respond differentially." Further evidence of the effect of environment upon identical twins leads Newman to say (51): "The intrapair differences in mental ability and scholastic achievement are considerably greater in separated than in unseparated twins."

Other Multiple Births

The literature on triplets and quadruplets has been increasing in late years. Some idea of the extent of the literature on triplets and quadruplets can be obtained from a perusal of the appended references.

In 1937 there appeared the *Collected Studies on the Dionne Quintuplets* (5). The papers are: "A Biological Study," by MacArthur and Ford; "The Mental Growth," by Blatz and Millichamp; "Early Social Development," by Blatz, Millichamp, and Chant; "Routine Training," by Blatz, Millichamp, and Harris; and "Early Development in Spoken Language," by Blatz, Fletcher, and Mason. MacArthur and Ford say all evidence indicates that these five children are identicals and were derived from a single ovum. In 1944 these famous and much-studied quintuplets were ten years old. This longevity in itself is quite unusual since, prior to the birth of these five, no quintuplets had been known to survive for any length of time. In July of 1943, quintuplets were reported born in Argentina. They are just now coming into the literature.

The Metropolitan Life Insurance Company's *Statistical Bulletin* for May, 1944, gives some interesting statistics about the Dionnes. In the first place, the fact that the quintuplets were all born alive is surprising, inasmuch as the stillbirth rate for twins is about two and a half times that for single births, and for triplets about five times as great. For quintuplets, the chances of stillbirth would, of course, be even higher. In the second place, the prematurity of their birth added another hazard. The Metropolitan *Statistical Bulletin* reports that in the first month of life close to half the deaths are due to prematurity. Third, the identity of the quintuplets would, statistically speaking, operate against their chances of survival. Figures for the period 1933-1941 indicate that among unlike-sexed twins 941 are born alive out of every 1000 twins born; among like-sexed twins 919 per 1000 are born alive. Among unlike-sexed triplets there are 891 live births among 1000 born, and among like-sexed triplets the figure is only 840. On the other hand, the fact that the Dionnes are all female reduced their hazards somewhat, since in 1941 the stillbirth rate for females was 25.1 per 1000 live births, whereas for males the stillbirth rate was 30.4 per 1000. The sex of the quintuplets was what might be expected from

Table II

CRIMINALITY, JUVENILE DELINQUENCY, AND BEHAVIOR PROBLEMS IN TWINS[5] (69)

Type of Twins	Adult Criminal	Juvenile Delinquents	Behavior Problems
Like sex, probably monozygotic			
Males, both affected	22	25	21
Males, one affected	11	2	4
Females, both affected	3	14	20
Females, one affected	1	1	2
Like sex, probably dizygotic			
Males, both affected	3	11	13
Males, one affected	20	5	10
Females, both affected	2	9	13
Females, one affected	3	0	24
Opposite sex, dizygotic			
Both affected	1	8	8
Only male affected	21	28	18
Only female affected	10	4	3
TOTALS	97	107	136

[5] From A. J. Rosanoff, L. M. Handy, and I. A. Rosanoff, *Criminality and Delinquency in Twins* (69), by special permission of the editors of *J. Crim. Law and Criminol.*

statistics. For the period 1933-1941 in the United States, boys had the advantage among single and twin births, whereas females took the lead in triplet and quadruplet births, the figures being: single births, 94 females per 100 males; twins, 97 females per 100 males; triplets, 101 females per 100 males; and quadruplets, 156 females per 100 males.

It sometimes happens that asymmetrical cell division occurs (73). Duplicate monozygotic births come about because in the mitotic division, at some early point, the cells resulting from division split away from each other instead of remaining together to form a mass of cells. When they do this, each group then starts an independent growth process. Some of the resulting cells may also split away and still further divide and split away. Of course, this splitting away does not go on indefinitely. However, when it does occur, there may arise, by asymmetrical division, three, five, six, or seven monozygotic offspring. In the case of the Dionnes, it appears that by a process of asymmetrical cell division in the fertilized ovum six embryos started independent development. The record shows that one of these aborted; hence, only five came to maturity.

Galton's Laws

We have seen the mechanical reasons why children are much like their parents, why identical twins are more nearly alike than any other pairs of human beings, and why resemblance becomes less as relationship becomes less. In addition to these facts, certain other points of interest concern us here. How much inheritance, for example, can one say that a child gets from his more remote ancestors? Galton (18) attempted to answer this question, and his formulation has since been known as the *Law of Ancestral Inheritance.* This law states that: "The two parents between them contribute *on the average* one-half of each inherited faculty, each of them contributing one-quarter of it. The four grandparents contribute between them one-quarter, or each of them one-sixteenth, and so on, the sum of the series one-half, one-quarter, one-eighth, and one-sixteenth, et cetera, being equal to one." Even with the more refined statistical evaluations of today, these proportions stand *approximately* as formulated by Galton. As a matter of fact, the figures mean little or nothing to the layman except as they show that the total heritable traits of an individual represent a combination of the contributions of *all* his ancestors but in increasingly great amounts as the individual's own parents are reached.

Another formulation of Galton (18) still serves a useful purpose.

It is known as the *Law of Filial Regression.* Interpreted broadly, it is helpful in understanding some apparent unlikenesses between parents and offspring. It is often noticed that children whose parents are unusual in some particular tend to be more nearly "average" in that particular than their parents. Comments on this phenomenon sometimes sound as though the speaker meant that any trait which is "average" is *thereby* more potent biologically than any other. Such is not the case, and Galton's Law of Filial Regression helps us to understand why. The law states that children of parents unusual in any particular tend to regress toward what most of their ancestors have been. The necessity for this is apparent in view of the Law of Ancestral Inheritance. To illustrate, suppose a child *does* have parents who are unusually tall. These two tall parents will undoubtedly contribute heavily to the heritage of the child, whether exactly one-half or not is of no particular concern at this point. The remainder of the child's heritage, approximately one-half, let us say, will be contributed by the remainder of his ancestors. What will their contribution be? By chance, or better by the law of statistical averages, most of them will have been average or near average in height. Some, of course, may have been taller and some shorter than average in height, but *most* of the multitude will not have deviated from the norm very greatly. Hence, although a large part of the heritage will be from two tall parents, another, perhaps equal, part will be from average ancestors. The offspring, therefore, will be pulled toward tallness and toward averageness with approximately equal force. The result is that they will, in the majority of cases, be taller than the average but not so tall as their parents. Conversely, if the two immediate parents are shorter than the average, the bulk of the ancestry will, in all probability, have been about average. The offspring of such a union, therefore, will in most cases be shorter than the average but taller than the parents. Of course, in individual cases we are not always able to see the operation of this law, but our attention is called to the fact that by and large one's heritable traits come first and foremost from one's parents but also in increasingly small amounts from more and more remote ancestors.

We have, in short fashion, sketched some of the essential mechanisms of heredity. One with a philosophical bent will have in mind, no doubt, many questions which this chapter has raised but has not answered. Human heredity and human reproduction are stimulating fields for leisure-time speculation and reverent query. We have spoken, rather too summarily perhaps, of human germ plasm—one of nature's most marvelous creations. Germ plasm is so precious to nature that she throws every possible protection around it. There is little that can harm it, and *fine* men and women realize its sacredness. Even when men and women are not fine, nature attempts to guard their germ plasm against desecration. Of this we shall speak further in the next chapter. It is well for us to remind ourselves that, even in this day of "scientific production management," man has not approached in the slightest degree the efficiency, to say nothing of the beauty, of nature's machinery for heredity and reproduction.

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Chapter II

THE PRINCIPLES OF HEREDITY AS APPLIED TO THE CASE LOAD

Introduction

All the facts mentioned in the preceding chapter would seem to indicate that the germ cells hidden away within the body of an individual are extremely resistant to most influences. The question then arises as to whether there are *any* factors that can affect germ plasm and thereby affect succeeding generations. We may mention here a few influences that have been studied extensively.

Effects of X-Ray and Radium

Recent research has shown that germ cells can be functionally changed by X-ray and by radium. In lower animal forms, these changes can be controlled so that they may be traced through succeeding generations. Little experimentation on human beings has as yet been done in this field, and little is known except that germ plasm can be *killed* by these irradiations. In fact, such treatment is occasionally used upon women in whom the reproductive life must be brought to a close for therapeutic reasons. In such cases, of course, effects are not passed on, for the simple reason that there are no succeeding generations. This, however, leaves another question open. Could it be that amounts of irradiation not sufficient to *kill* germ plasm could still change it and thereby affect succeeding generations? This has been demonstrated to be true in lower animals. There is good reason for believing that future research will show it to be true likewise in human beings. What changes may thereby be produced in the race awaits further study.

Aside from questions of the heritable effects of roentgen and radium irradiation, there are other aspects of the question that we should consider. According to Murphy, Shirlock, and Doll (55), irradiation of the maternal pelvis during the childbearing period may produce: "(a) no effect on ovulation; (b) temporary; or (c) permanent sterility." In cases of temporary sterility, these authors say, children born subsequently show no deleterious effect in either health or development. Irradiation during pregnancy, however, seems to tell a different story. Effects appear to depend upon the strength of radium or X-ray exposure and the age of the embryo or fetus. Exposures for diagnostic or measurement purposes are usually of short duration, and usually occur late in pregnancy. Exposures for therapeutic purposes, on the contrary, are given early and may be of greater strength. In such cases, the fetus seems to be liable to suffer severe effects, microcephaly being a common result (55).

Lead Poisoning

Lead poisoning has likewise been shown to produce germinal changes. In some occupations this possibility constitutes a hazard of considerable magnitude. Painters, workers in pottery factories and in some other industries are liable to the danger. Wallin (91) quotes Rennert (citation not given), who reports "frequent abortions, deaf mutes, and macrocephalics in mothers employed in pottery works in Germany." Although these instances may be authentic, it must also be remembered that lead poisoning is definitely known to pass to the fetus through the maternal blood stream and through the mother's milk to the nursing child. These latter cases, of course, have nothing to do with germ cells or heredity.

Effects of Alcohol

Now let us consider the question of alcohol (14). Certainly one sees many families where several generations are alcoholic. Does this then prove that alcohol is a sufficiently permeating chemical that it affects not only the body but also the germ cells, so that succeeding generations show the results? Many experiments have been performed upon animals which can be alcoholized and in which new generations can be produced within a short time. Some experiments seem to indicate that alcohol may for a time produce a superior stock. Where this is true, it is probably because alcohol has had a lethal or death-dealing effect upon the weakest of the strain, leaving only the strongest to reproduce themselves.

It is also easy to demonstrate that the *bodies* of these animals can be affected by alcoholizing them. Eye defects, for example, can be produced in this way. No conclusive evidence to date, however, has been brought forward to show that these pathologies are passed on indefinitely. It is true that there have been some cases of eye defects discovered in newly born litters from the alcoholized strains of animals, but it must not be overlooked that the same eye defects have been discovered to about the same extent in the newly born of the non-alcoholized strains. In other words, although alcohol can produce these anomalies in any given generation, there are evidently other factors quite aside from alcohol that can produce them also. One cannot avoid confusion when reading the literature in this field. For almost every experiment claiming to prove transmissible germinal effects of alcohol, there is another experiment under much the same conditions in which the germinal changes did not appear. To quote Raymond Pearl (57):

> Alcohol acts as a definite but not too drastic selective agent upon both germ cells and developing embryos, eliminating the weak and leaving the strong. . . . Comparatively little critical work has yet been done on the racial effect of alcohol upon man. But the most thorough and significant investigation which has been made in this field (Polisch) shows that in a group of very heavy, steady drinkers there was not the slightest evidence of demonstrable germinal injury of the offspring.[1]

H. S. Jennings (29) says, in the same vein:

> The genes show a very great resistance to alcohol. Either it does not alter them at all, or it kills them; in either case no modified descendants result.

As regards environment, certainly no one would care to see children reared by alcoholic parents, because of the physical and moral hazards involved. But as regards biological heredity, we must simply say that as yet alcohol has not been demonstrated to produce any transmissible effect upon germ cells.

From the standpoint of family welfare, the problem of heredity and alcoholism is complicated in still another fashion. It is now an accepted fact among psychiatrists and mental hygienists that the mental effects of alcohol provide a *way of escape*. This is to say, a man (or woman), because of bad mental habits or insufferable living conditions, or both, may find life difficult. He may feel that alcohol helps the situation because, at least temporarily, it helps him to forget or releases his tensions. This way out can, of course, easily become a habit. (It is not to be inferred that this constitutes the only reason for alcoholism.) (1, 5, 7, 11, 15, 36, 86.)

Now, two subtle and very important questions emerge in such cases. Let us suppose, in the first place, that a reality-evading person continues to try to escape from his difficulties by excessive use of alcohol. In time, mental and social symptoms appear. It is very difficult to say to what extent these features are the cause or to what extent they are the result of alcoholism. Does the individual become peculiar because he is alcoholic or did he become alcoholic because he was constitutionally peculiar? Do certain types of nervous system and certain kinds of mental make-up inherently lack the self-control to avoid alcoholism? We cannot answer this question certainly as yet. Until we can answer it, we shall be unable to say whether or not such a type of nervous system would be heritable. From the standpoint of human genetics, these are questions that remain unanswered.

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[1] From Raymond Pearl, "Alcohol. Biological Aspects," *Encyclopedia of the Social Sciences*, by permission of The Macmillan Company, publishers.

A second difficult question arises regarding the families of alcoholics. Suppose a child grows up in a home where family discord, abuse, poverty, and humiliation follow upon alcoholism. It is quite possible that that generation will feel *it* must find a way out, a way of escape, a way of dulling sensibilities. In such an environment there will probably be no inhibitions or prohibitions against the use of alcohol. With alcohol already at hand, it is easy to see how the second generation may fall into the habits of the fathers. This, however, implies nothing one way or another about germ plasm.

Venereal Disease

Venereal diseases raise another question of considerable importance as regards heredity. These are the diseases usually contracted through venery or sexual intercourse. Gonorrhea and syphilis are venereal diseases. Their common mode of acquisition is, however, about all they have in common, since they are caused by entirely different microorganisms. Gonorrhea is interesting, from the standpoint of heredity, because of the fact that it is an extremely potent cause of sterility in both males and females. In fact, it is often called "the great sterilizer." In a subsequent chapter we shall also see the *environmental* effect of gonorrhea as a factor in producing blindness during the birth process. This, obviously, has nothing to do with germ plasm.

Syphilis is likewise of interest from the standpoint of heredity. Sherbon (75) says:

> The toxins of syphilis in the blood of an infected mother or father may actually injure parts of the germ cells before or after fertilization, and the child that develops from such an ovum will be a defective child, but may not have an active infection; or he may be both defective and diseased. In rare cases it is possible that the sex chromosomes of the fertilized and injured but surviving ovum may also be injured, and defects accordingly may appear in the "third and fourth generation." [2]

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[2] From Florence Brown Sherbon, *The Child* (2nd edition), by permission of McGraw-Hill Book Co. Inc., publishers.

Of particular interest also is the fact that syphilis, sometimes referred to as the "great slayer of the unborn," produces a very large number of stillbirths and miscarriages. Social workers are well acquainted with family histories that show such entries as "three children living and five miscarriages" or "two children living and four died in infancy." History also is replete with similar examples.

> Henry VIII, who ascended the throne as a brilliant and talented young prince, is shown to have died at the age of 55, a gross and horrible monster, leaving behind a story of horrible illness in himself and his wives, a long list of prematurely born children, and the early deaths of two infants. This could have been caused, according to Dr. MacLaurin, only by syphilis (87).

Syphilis may, like gonorrhea, produce blindness during the birth process.

It must always be borne in mind that accidents that occur *after* fertilization, even though before birth, are environmental nevertheless. If the fetus becomes infected within the uterus, it may be born with active infection that is environmental and not hereditary. Cases are on record of babies born to mothers who happened to have measles at the time of delivery. The baby who thus contracts measles by infection shortly before or during birth cannot thereby, of course, be said to have hereditary measles. They are environmental because they have nothing whatever to do with germ plasm. It is only an accident of time that the infection was picked up at or before birth rather than after birth.

To summarize, then, what factors, if any, may affect both somatic and germ plasm? Alcohol is not at the present time known certainly to affect human germ cells. In lower animals it seems to have a lethal effect upon the weakest cells, but this effect has not been demonstrated in the human race. X-ray and radium certainly have lethal effects upon germ cells and may conceivably cause germinal changes when the germ cells are not rendered sterile. If such effects exist, their nature is not entirely known at present, so far as mankind is concerned. Lead poisoning also appears to have lethal effects upon germ cells and developing embryos. There is reason also for thinking that it may affect germ cells in such ways as to produce offspring abnormal in one way or another. Gonorrhea most certainly has a lethal effect upon germ plasm. It may also cause blindness during birth, which, however, is not hereditary blindness. Syphilis can destroy germ cells, and it can so affect them that they produce offspring different in many ways from what they would otherwise have been.

These factors, so far as is now known, are the only ones that can affect germ plasm within the body in such ways that reproduction and offspring are modified thereby. One additional factor is now being studied, namely, cosmic ray. As yet, nothing is reportable so far as human heredity is concerned.

Heredity and Disease

Practical considerations make it necessary to investigate the possible role of heredity in the production of certain diseases. Jennings (29) feels that: "Most diseases are greatly influenced by the conditions of life, yet most or all of them are likewise influenced by the nature of the individual's genetic constitution." He goes on to speak of the "hereditary element" involved in tuberculosis. After referring to animal experiments on cancer production, he says:

> It is probable that in man there are similar diversities in susceptibility to cancer, resulting from the different genes of different individuals. . . . A situation that is similar in principle to that sketched for tuberculosis and cancer exists for most, if not all, diseases, infectious or otherwise. . . . There can be little doubt that, other things being equal, some genetic constitutions are more readily attacked by plague, by small pox, by typhoid, by pneumonia, than others.[3]

Popenoe (65) says, in regard to the Schick Test for susceptibility to diphtheria, that Italian children in the United States show little susceptibility to diphtheria and Negroes show much susceptibility. It is said that this susceptibility or diathesis is a recessive trait. He says further that not only does cancer "run in families," but even particular kinds of cancer appear persistently in certain families. He cites the case of Napoleon, who, as well as his father, his brother, and two sisters, died of cancer of the stomach. Although trauma is undoubtedly the prime cause of cancer, yet we cannot overlook the fact that the cancer, when it occurs in the same family, tends to appear at the same age and to attack the same organs in different members of the family.

Even rickets and goiter in given neighborhoods appear much more in some families than in others. Popenoe also mentions the case of flatfoot, which may be inherited and yet only be brought out by long standing on the feet. In the English army under such conditions, Popenoe says, the malady is six times as common among Jewish as among non-Jewish soldiers. Snyder (83) says that a hereditary factor is responsible for the fact that some families are unable to develop immunity to measles and, therefore, may have one attack after another. Holmes (25) gives Huntington's chorea, of which we shall have more to say in a later chapter, as another case in point. In it "heredity is apparently the all-important factor. This malady is inherited as a typical Mendelian dominant." He refers to a family history of 962 cases, studied by Davenport and Muncey, all of whom derived their ancestral stock from six or seven individuals. Among these were three brothers who came to the United States in the seventeenth century (12, 79).

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[3] From H. S. Jennings, *Biological Basis of Human Nature*, by permission of W. W. Norton & Co., publishers.

Holmes (25) gives illustrations of the unfortunate condition known as "split hand" or "lobster claw" in which the fingers are fused and develop disproportionately. He states that the trait is passed on as a Mendelian dominant. An even more serious condition, in which the afflicted individual develops neither hands nor feet, has been traced through several members of certain families.

Various kinds—but, of course, not all kinds—of blindness and deafness undoubtedly have hereditary bases. Night blindness and color blindness are said to be sex-linked dominants—that is, dominant traits, responsibility for the transmission of which lies in the sex chromosome. Aniridia (congenital absence of the iris) is passed on by a mother to approximately one-half of her children of both sexes (83, 84). Microthalmic and hydrothalmic blindness are also thought to be transmitted directly (34). Albinism is said to be due to a single recessive gene.

Diabetes, according to Holmes, is commonly transmitted as a recessive. Asthma and hay fever, as well as certain skin conditions, depend in large measure upon the influences of heredity. To quote Dr. Holmes again: "It would require a large book to give an adequate account of hereditary human ills. Defective genes produce the greatest imaginable variety of effects" (25). He includes in the list: atrophy of the optic nerve; short, stubby fingers; muscular atrophy; fragility of bones; hemophilia; harelip; baldness; excessive hair; supernumerary teeth; lack of teeth; dark-colored urine; a small, harmless pit in the lobe of the ear; and a proclivity to bronchial asthma.

Many other physical peculiarities as well as diseases transmitted through heredity can be named. For example, a red scaly condition of the skin known as psoriasis is, according to Snyder (83) passed on as a Mendelian dominant in some families and as a recessive in others. Macklin (49) gives interesting discussions relative to the necessity for physicians recognizing the familial tendencies in such conditions as xeroderma pigmentosum, a cancerous degeneration of the skin; ectodermal dystrophy, in which the hair is sparse, the skin is gray, and the teeth are few and irregular; many of the allergies; and myotonia congenita, a disease in which voluntary movement is very difficult to initiate and once initiated is very difficult to stop. Lack of tooth enamel, a white forelock, and hemophilia are frequently cited in genetic literature.

Opinion veers back and forth in relation to the role played by heredity in certain crippling conditions. (See also Chapter XVII.) Although it is known that some paralyses are caused by injury during the birth process, it is thought by many authorities that, in a large number of cases of congenital palsy, the etiological factor is a hereditary one (23). Recently the author worked with two sisters both of whom were diplegic, having both arms and both legs involved. The history reveals that the older child had been delivered after a prolonged and difficult labor. The paralysis was, therefore, thought to have been due to birth injury. When the mother became pregnant a second time, her medical advisers recommended that this time she be delivered by a Caesarean section. The second child was accordingly delivered by incision through the abdominal and uterine wall. In spite of this safeguard, the second child was spastic in just the same way as the first.

Family Treasures (94), by Whitney, is an interesting book for amateurs in the field of genetics. Family portraits depict how some single trait—hair line, peculiarities of eyes, mouth, ears, nose, hands, feet, et cetera—can be traced through from two to five generations of families who have kept family albums.

Tuberculosis *appears* to "run in families." What are the facts in the case? In the light of present evidence, it seems perfectly safe to say that tuberculosis itself does not affect germ cells. Let us suppose that two children are born to a mother (or father), one being born before and one after the parent has developed tuberculosis. The inheritance of the two children would *thereby* be not one whit different. In other words, it cannot be shown that tuberculosis, as such, does anything to the germ cells within the body of the patient. However, the matter is not quite so simple as this statement might lead one to suppose. Does the germ plasm, on the other hand, have anything to do with the development of tuberculosis? Why does one person develop tuberculosis and another person not? The answer implies two factors, namely, tuberculosis bacilli *and* a body in which such germs may easily become active. So far as the first factor, germs, is concerned, it can be said definitely that they are not inherited or passed on. What of the second factor—peculiarity of inherited body structure? Long limbs or short limbs and five fingeredness or six fingeredness, as well as many other physical traits, are inherited. It is rather generally agreed by authorities that, in the same way, peculiarities of lung tissue, which make it resistant to disease or an easy prey to disease, are inherited also. Elliott R. Downing (13) says:

> The tendency to tuberculosis and to most diseases, insofar as there is evidence, is similarly a recessive. In the normal condition there is a double dose of the gene for effective resistance. In some families this is lacking. A family showing, generation after generation, many cases of tuberculosis would be suspected of lacking this dominant gene. An individual without the gene, mating with a normal person, would have normal children, but heterozygous for the resistance gene.[4]

Popenoe (65) says that tuberculosis is often traceable to heredity and is seldom passed from husband to wife. European Jews, he says, have a high resistance to it. Snyder (83) claims that the heritable element in tuberculosis is responsible for the fact that it tends to affect the same organ, or even the same part—such as the right or left lung—in families. Also, he says, it tends to occur at the same age in members of a family. So far as the social worker and the nurse are concerned, there is still the possibility of *prevention*. Downing does not say that children are born with the disease, but only that they may be born lacking the resistance to it. Perhaps, then, we can help, euthenically, to protect these slight resistances from exposure to conditions likely to produce tuberculosis. For a possible genetic linkage between tuberculosis and schizophrenia, see the following discussion of the latter disease.

Epilepsy

Epilepsy, with which the nurse, the social worker, and the teacher have many unfortunate experiences, has been subject to much study by geneticists. Before going any further, however, it is well to remember that there are several kinds and degrees of epilepsy. These points will be considered more fully in a later chapter. It is recognized that certain cases of the disease come about as a result of injury and are, therefore, not transmissible. There seems to be ample evidence, however, to show that some other kinds of epilepsy are heritable (6, 72). Holmes (25) says: "It is likely that the different kinds of epilepsy are inherited in different ways. . . . Epilepsy is usually a recessive or partially recessive character." Certain it is that among the other members of the families of epileptics there are usually large numbers showing migraine, chorea, paralysis, extreme nervousness, and infantile convulsions.

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[4] From Elliott R. Downing, Chapter 14 in *The Nature of the World and of Man* (by H. H. Newman, et al.), by permission of the University of Chicago Press.

Kanner (33) fully realizes the difficulties of obtaining definitive data on the role of heredity in the production of epilepsy. He says:

> Instead of taking sides in a controversy based on different kinds of material (institutionalized or ambulatory) and on different concepts of heredity and including different criteria (convulsions alone, or epilepsy and migraine, or adding alcoholism, psychoses, or adding or not adding paternal desertions; or any number of other items), we may be permitted to let the facts speak for themselves by listing the personality disorders of any type in the families of fifty unselected, not institutionalized children suffering from idiopathic epilepsy.[5]

He then gives thumbnail family histories of 50 such cases. In nine families, the history, as given by Kanner, is negative. The families are reported as "stable." This leaves 41 families to be accounted for. Of these, 21 show convulsions, spasms, fainting spells, or epileptic seizures at one or more places in the family history. Many of these histories show, in addition, other evidences of disturbed nervous systems. Of the remaining 20 family histories, which show no history of seizures or spasms except in the patient, there is not a clean record among them. That is to say, every history shows one or more such records as "hysterical, alcoholic," "deserted family, hypochondriacal, excitable," "breath-holding spells in infancy, enuresis, eccentric," "stubborn, superstitious, schizophrenic," "paranoid, deaf-mute," "feeble-minded, totally illiterate, imbecile," "ferocious temper, alcoholic." The prevalence of certain other diseases in these family histories is interesting even though there are not sufficient cases to warrant statistical treatment. Diabetes, for example, appears in the histories of five of the patients and with greater frequency perhaps than is usual. One patient had a father, paternal grandmother, five uncles, and a sister with diabetes. Another patient's family history shows diabetes in the maternal grandfather, uncle, and aunt. Another had a diabetic grandmother; another, two diabetic grandmothers; and another, a diabetic paternal grandfather. Two patients' family histories show asthma in at least one relative. One history shows two cases of chorea.

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[5] From Leo Kanner, *Child Psychiatry* (second printing), by permission of Charles C. Thomas, publisher, Springfield, Illinois.

Rosanoff, Handy, and Rosanoff (72) studied 107 cases of epilepsy in twins. Heredity could be shown to be operative by the fact that monozygotic twins had the disease concordantly in 61 per cent of the cases, while dizygotic twins had it concordantly in 24 per cent of the cases. Heredity is not the sole etiological factor, however, since among dizygotic twin brothers and sisters of epileptic persons there is a much higher incidence of epilepsy than among single-born siblings.

An added technique for the investigation of inheritance has been available in this country since the 1930's. Electroencephalography produces inked records on moving tape of the passage of electrical impulses through the brain. It has been accepted that recordings from the scalp are essentially similar to those direct from the cortex, hence electrodes are applied to the scalp; and waves of different frequencies can be noted. These waves "vary widely during the growth of the individual and the normal shifts of his activities and environment, as well as under abnormal damaging conditions." As early as the seventh month of pregnancy, fetal waves have been recorded that were found to be similar to postnatal records from the precentral region of the same individual. Apparently there is a high degree of similarity in the brain wave patterns of members of the same family. In identical twins, the patterns are very similar. Lennox, Gibbs, and Gibbs (43, 44) have studied the phenomenon in identical twins with a history of epilepsy. In instances where only one twin actually had epilepsy (with its peculiar dysrythmia), it was found that the other twin also had an abnormal wave record. The twin with epilepsy had the same fundamental wave pattern, but in addition had a history of injury with possible brain damage. Maltby and Rosenbaum (50) have found also that a great many women having eclampsia (sudden attack of convulsions) have cerebral dysrhythmia in their electroencephalograms and also show a *family history* of convulsive disorders.

Mental Disease

For several reasons, mental disease gives great difficulty to the hereditarian. Among these are difficulty of diagnosis, the interplay of heredity, on the one hand, and shock, anxiety, illness, worry, and other environmental, superinducing factors on the other hand. The presence of a mentally ill individual in a home may cause behavior disorders in other members of the family, still further complicating the picture (2, 27, 38, 53, 60, 67, 70, 79, 80).

Manic-Depressive Psychosis

Pollock, Malzberg, and Fuller, reporting in various issues of the *Psychiatric Quarterly* (60 and 61 for example), conclude, as regards manic-depressive psychosis, that there is undoubtedly an underlying familial basis, although as yet they are not prepared to state the manner of its transmission in exact biological terminology. At least, its incidence does not fit the Mendelian ratio. They suggest, however, that the sex chromosome enters into the process in some manner. Two thousand three hundred and seventy-seven relatives of 155 manic-depressive patients furnish the data for their conclusions.

Rosanoff, Handy, and Plesset (70), in their study of 1014 pairs of twins, found 90 pairs afflicted with manic-depressive psychosis. Of these twin cases, they say, "the bulk of the cases occur on an hereditary basis either under ordinary conditions of life or under the influence of external factors which are, for the most part, of psychogenic nature." They present also hypothesis as to the method of biological transmission.

Schizophrenia

The hereditary role in the etiology of schizophrenia (formerly spoken of as dementia praecox) is an involved matter to untangle. Diagnosis is not always uncomplicated; there are different types of the disease (simple, hebephrenic, catatonic, and paranoid); and the condition is graded—that is to say, there are "schizoid personalities" who are not committable as having well-defined schizophrenia. Pollock, Malzberg, and Fuller (60 to 64) conclude that, although inheritance is involved in the transmission, nevertheless, environmental factors are of importance. Rosanoff, Handy, Plesset, and Brush (71) studied 142 pairs of twins who showed dementia praecox in one or both members of the pair. Forty-one pairs of these were monozygotic, and in 68.3 per cent of them both members were afflicted with the disease. One hundred and one pairs were dizygotic, and in 14.9 per cent of them both members were afflicted. This would seem to indicate that the closer genetic relationship between monozygotic twins is in some way tied up with the incidence of the disease. The authors agree with Pollock, Malzberg, and Fuller that, although heredity plays an important role in the production of the disease, it is inadequate in itself to produce the disease and, indeed, is not always present as a factor.

Kallman (30, 31, 32) studied the family histories of 1087 cases of schizophrenia. Definite schizophrenia was discovered in the ancestry of 10 per cent of the cases and "schizoidia" in another 25 per cent. The incidence of the disease was found to be 19 times higher in the children and 5 times as high in the grandchildren of these patients as in the general population. Interestingly enough, 70 per cent of the children were born before the parent was committed to a hospital, which, in a measure at least, reduces the question of parental copy for imitation. "Schizoid types, secondary cases of schizophrenia, strongly marked forms of psychopathy and feeble-mindedness" were found in more than two-thirds of the children, nearly one-half of the grandchildren, about one-third of the siblings, and close to one-fourth of the half-siblings, nieces, nephews, and great-grandchildren. Kallman also found that, in the case of children with two schizophrenic parents, the probability of having the disease was 68.1 per cent, and, if one parent was schizophrenic and the other normal, the probability was from 15 to 24 per cent.

Schulz (74) in a study reported in 1940 says that the expectancy is 41 per cent where both parents are schizophrenic and 15 per cent where only one parent is so afflicted. These figures agree fairly closely with Kallman's figures.

Heredity and Intelligence

A detailed discussion of the role of heredity in regard to intelligence cannot be given here (10, 16, 24, 35, 40). For one reason, we should find ourselves involved in a long-standing controversy as to a definition of intelligence. Furthermore, the literature, in addition to studies mentioned here, is so voluminous as to require the equivalent of many college class hours, if, indeed, not *semesters,* for a thorough mastery. Certain phases of the subject, however, will be touched upon here and from time to time in subsequent chapters. We can say with safety, however, that geneticists are convinced that one's intelligence is determined by a very great number of genetic determiners (genes) which affect the entire nervous system, the endocrine glands, and other bodily structures. Maximum development naturally depends upon environmental influences also.

For the present, we may at least clear up some confusions. Take the matter of mental deficiency, for example. This is by no means a single clinical entity. There are many kinds of mental deficiency, and possibly each kind has its own peculiar etiology and its own type of hereditary involvement, if any. *Mongolism,* a type of imbecility, is characterized by certain easily recognized physical features suggestive of Mongolian physiognomy. The role of heredity in the production of this disease is not clearly understood, but at least there are more Mongols among the relatives of Mongols than among the population in general (83). There is increasing evidence, however, that the age of the mother at the time of the birth of the child plays a large part in the etiology of mongolism, although some current research indicates that uterine bleeding is an etiological factor.

Another type of mental deficiency known as *juvenile amaurotic idiocy* occurs almost exclusively among Jewish families. It develops early in life and eventuates in progressive mental defect, paralysis, and death. It is thought to be caused by a recessive gene (7, 83).

Tuberose sclerosis, which exhibits mental deficiency, frequently epilepsy, sclerotic areas in the cortex, and body tumors, is thought to be due to a dominant factor. *Cretinism,* with its mental deficiency and physical dwarfism, is due to a thyroid dysfunction. It has been extensively studied in Switzerland and other countries where iodine is insufficient in the water and where goiter is common. Even in such countries, the incidence of cretinism is much higher in some families than in others. *Phenylketonuria* is another type of imbecility that has a hereditary basis, the condition apparently being due to a recessive factor. The significance of the name arises from the fact that such mental deviates excrete an abnormally large amount of phenylpyruvic acid in the urine (58, 83).

Progressive muscular dystrophy, cerebral diplegia (mentioned elsewhere also), *Friedrich's ataxia, inherited aphasia,* and many other conditions involved in the clinician's need to evaluate intelligence have genetic roots that cannot be discussed here.

We have said previously that whatever is actually hereditary within an individual must have become a part of his equipment at the time of the union of the mature haploid germ cells. The importance for our purposes of the above statement is extreme. It furnishes a negative answer to all such questions as the *transmission of acquired traits* and the possibility of *prenatal influence.* The latter will be reserved for discussion in Chapter III. We must at this point, however, consider the first of these questions.

From the standpoint of the social worker, it is extremely important to know whether a family, all members of which have been clients of the agency for several generations, is deteriorating *racially.* As a result of deplorable living conditions, will each succeeding generation come into the world biologically worse off than the preceding generation? Likewise, in evaluating social case work, it would be a satisfaction to know whether improvements that an agency is able to help a family make in its way of living will soon pass away, or whether they may be expected to improve the *stock* so that future generations will come into the world *via* improved germ plasm. Of course, the question never is: "Will present improvements help the family *now?*" or "Will present disease or poverty or lack of education handicap the family *now?*" An affirmative answer to these questions is usually evident enough. The matter becomes a little less clear, however, when one thinks about *many* generations.

So far as the living conditions of any *one* generation are concerned, it goes without saying that good accumulations have an increasingly good effect, while bad accumulations have an increasingly bad effect. Certainly no one denies that if parents are physically debilitated and give inadequate care to their offspring, the health of the offspring suffers in consequence. In these families, bad habits of hygiene easily creep in. Suppose these offspring live to marry and have children. If, because of bad hygienic habits and neglect, *their* health is bad, they, too, may be tempted to overlook essential precautionary measures for their children. Furthermore, their bad habits formed in early childhood are not likely to change just because they have become parents. Their children, in turn, may be allowed to grow up disregarding every law of hygiene. All this is merely to say that a bad social and hygienic *environment* has been handed on from one generation to another. In other words, each generation is most certainly affected by its *social inheritance*. This term, *social inheritance,* by virtue of its first component would seem to include such factors as: poverty; malnutrition; some disease; mental hygiene; educational, vocational, social, moral, ethical, and religious influences. It *does* make a difference to a child under what combination of these factors he is born. It makes a difference in the way he will live and in the habits he will form. It is perhaps not far from the truth, however, to say that in practically no particular will it make one whit of difference in the germ plasm that he or she will hand on to the next generation. The second word in our phrase, *social inheritance,* merely implies that the condition belongs to an individual by virtue of conditions pertaining to the family in which he was born.

Euthenics and Eugenics

A consideration of such factors may be clarified by the introduction of two technical terms, *euthenics* and *eugenics.* Euthenics includes all efforts to improve *present living conditions.* In contrast to euthenics stands eugenics (66). By this we mean all measures designed to improve germ plasm and *future generations of men.* Improved sanitation, proper hours of sleep, balanced diets, sufficient exercise, adequate medical care, and good mental hygiene are all euthenic in their influence. Even prenatal care is euthenic only, in most instances. Prenatal care can easily make birth conditions more normal and may thereby prevent death, deformity, or injury. However, these affect only the mother and the child, and have in no way changed germ plasm. The eugenic program, on the other hand, concerns itself with problems of differential birth rates, selective mating, and all factors known to affect germ plasm.

Transmission of Acquired Traits

The assurance with which we can now say that living conditions in almost no way at all affect germ cells comes as a result of painstaking research on the part of biologists over a long period of time. A few years ago, the eminent Russian physiologist, Pavlov, startled the world. He announced that he had found evidence of the transmission, through germ plasm, of traits acquired during the lifetime of mice. The mice had *learned* to behave in a certain way in response to the sound of a bell. Their descendants, it appeared, showed the same tendency *without* learning. This seemed to indicate that germ plasm had been affected. Considering the reputation for accuracy and integrity that Pavlov enjoyed from his fellow scientists, the announcement came as a bewildering surprise. His reputation for scientific honesty was justified when somewhat later Pavlov issued a statement withdrawing his first pronouncements. Apparently, he had found a source of error in his own work.

More recently, the late Dr. McDougall of Duke University conducted a very carefully controlled experiment on many generations of rats. The rats were taught certain behaviors in a tank of water. Succeeding generations seemed to learn the trick more quickly and with fewer errors than the earlier generations. This would look like transmission of acquired traits. McDougall attempted to check against *selective breeding* by which, of course, he would breed only the best and smartest rats. By such a process one could always *breed* a quicker-learning race of rats. This is what stockbreeders do when they carefully select for breeding purposes those cows whose milk contains the most butterfat. They have thus produced virtually new breeds of butterfat cows.

A layman cannot adequately criticize or evaluate McDougall's methodology. We can, however, look around us vainly for any other significant evidence that bodily changes or mental changes are passed on to succeeding generations through the germ plasm. To use some familiar examples, Chinese girls of past decades who wished to have small feet were obliged to bind them just as much as if many previous generations had not dwarfed their feet by binding. Dehorning one generation after another of cattle has never been known to produce a generation of hornless cattle. No matter how much education previous generations in any one family may have had, each succeeding generation has to go through the learning process for itself. Since research on this question belongs primarily to the fields of biology and genetics, we may do well to quote Morgan (54). After reviewing McDougall's work and other experiments in the fields of biology, physiology, zoology, medicine, and psychology, Morgan says:

> An impartial survey of all this evidence cannot fail, I think, to give the impression that the many attempts to obtain crucial evidence that somatically acquired characters produce specific changes of the same kind in the germ cells have failed. If such effects are transmitted, and especially if these are pre-eminently adaptive ones, there is every reason to suppose that evidence of such transmission should be obtainable—in fact, should be abundantly apparent to anyone making careful observations. There is lack of care in experimentation and of acumen in reasoning from the evidence manifest in most of the reported results.[6]

So far as science has conclusive evidence at present, it appears that traits acquired during life are not passed on through germ plasm. In some instances this would appear most discouraging; in others, it is nothing short of a blessing from heaven.

Nature and Nurture

Another question relative to heredity is of particular interest to educators and social workers. Can the effects of heredity upon intelligence be offset by reverse conditions of environment? Can the improvement of living conditions change intelligence for the better? Such a question, if answerable, would be of extreme importance for any generation even if it could not be shown that the germ plasm *per se* had been changed in the process. If, for example, we could take a child who, because of poor germ plasm and defective heredity, had low-grade intelligence and could place him in a home of superior intelligence, thereby raising his intelligence, the experiment would certainly be worth the effort. We could very well afford to overlook the question as to whether we had also thereby changed the child's germ plasm. In other words, the question of nature versus nurture is of extreme importance or, at any rate, will be when and if we can answer it. (4, 16, 26, 41, 76, 88.)

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[6] From T. H. Morgan, Chapter 2 in *The Handbook of General Experimental Psychology,* by permission of the Clark University Press, publishers.

It may be interesting to approach the research on this vexing problem historically. In 1928, Dr. Freeman, and others (16), of Chicago obtained through the Illinois Children's Home and Aid Society records that included the following children: *home group* of 401 children in foster homes; 74 children designated as the *pre-test* group who had been given a Binet test shortly before they were placed in their present homes; a *sibling group* consisting of 159 pairs of children with siblings from whom they had been separated for periods ranging from 2 to 13 years; a *limited sibling group* of 130 pairs who had been separated for 4 or more years; 40 pairs known as the *foster-own group,* one member of which was an own child and the other member of which was a foster child being reared in the same home; 72 pairs of *unrelated children,* both of whom were foster children being reared in the same home. The age at which the foster children had been placed ranged from 6 months to 17 years, with the mean at 4 years, 2 months. Intelligence tests were given to all children at the time the study was made. Home ratings for the foster homes were also secured. Freeman feels that selection of superior children by superior foster parents was ruled out in the cases of his group, although some students of his data have questioned this assumption. The validity of his findings, of course, hinges largely upon this question. Freeman feels that his data indicate that intelligence is influenced by environment. He claims that not only did children from poor homes raise their intelligence ratings after placement in better homes, but also that the better the home into which a child was placed, the greater was his gain in intelligence rating. He furthermore claims that children placed at an earlier age gained more than those placed at a later age.

At the same time that Dr. Freeman's investigation was underway in Chicago, Dr. Barbara Burks (4) was making a strikingly similar study of foster children in California. Perhaps one should say that the *problem* and the *cases* chosen for study were similar, for certainly the *results* that she obtained and those obtained by Dr. Freeman were not similar. Dr. Burks' study was made upon 214 *foster children* and 105 *own children* who served as a control group. The foster children chosen had all been placed in their foster homes before the age of 12 months. This choice of cases was intended to obviate selective placement. All foster children were those who had been legally adopted by married couples, both of whom were living at the time the study was made. Foster children were between 5 and 14 years of age, which allowed for adequate intelligence testing. Both foster parents and true parents, so far as was definitely known, were white, non-Jewish, American, British, or North-European. Children of the control group were matched with those of the foster group for age, sex, and number of 5-year-olds who had no kindergarten attendance. Control families were matched with foster families for locality, type of neighborhood, and occupational field of the father. Control families were also white, non-Jewish, American, British, or North-European families who spoke English. Both true parents were alive and living together at the time of the investigation. The Stanford-Binet test, a home-information blank, a rating of the child on character and temperament traits, and the Woodworth-Cady emotional-stability questionnaire were among the investigation items used. Dr. Burks' conclusions differ considerably from those of Dr. Freeman. She says (4):

> Home environment contributes about 17 per cent of the variance in I.Q. Parental intelligence alone accounts for about 33 per cent. The total contribution of heredity (that is, innate and heritable factors) is probably not far from 75 to 80 per cent. Measurable environment, one standard deviation above or below the mean of the population, does not shift the I.Q. by more than six to nine points above or below the value it would have had under normal environmental conditions. In other words, nearly 70 per cent of school children have an actual I.Q. within six to nine points of that represented by their innate intelligence. The maximal contribution of the best home environment is apparently about 20 I.Q. points, or less, and almost surely lies between 10 and 30 points. Conversely, the least cultured, least stimulating kind of American home environment may depress the I.Q. as much as 20 I.Q. points. But situations as extreme as either of these probably occur only once or twice in a thousand times in American communities.[7]

Although the above summaries do not begin to do justice to the elaborate statistical treatment of either the Freeman or the Burks study, one thing is certainly apparent—the almost exactly opposite conclusions reached by studies otherwise so essentially similar. Much literature has been amassed since the publication of these investigations; one student after another has tried to justify or explain away the opposed conclusions.

One of the most significant of these studies was made by Leahy (41), and was published in 1935. Dr. Leahy says, in speaking of the

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[7] From Barbara S. Burks, *1928 Yearbook of the National Society for the Study of Education* (Part I, Chapter 10, pp. 308-309), by permission of the Society.

Burks and Freeman studies, "the discrepancies between the results of their investigations stimulated the present research." Since legitimate children that are available for adoption can be found in relatively small numbers, Dr. Leahy limited her study to illegitimates. In order to secure experimental children not less than 5 years of age nor more than 14 (the ages giving most reliable test results), the records for all illegitimate adopted children in Minnesota during the period 1918 to 1928 were examined. Records were thus secured for 2449 children. From this group, there were chosen for study only children placed in adoptive homes at age 6 months or younger; only those known to be of white, non-Jewish, North-European extraction; those not less than 5 years of age nor more than 14 at the time of the investigation; children reared in communities of 1000 or more; children legally adopted by married persons; children adopted by individuals who were of white, non-Jewish, North-European extraction. By the laying down of such criteria, the matter of selective placement was controlled to the greatest possible extent. Each of these children was then matched with an *own* child as follows: for sex; for age within plus or minus 6 months; for location of father's occupation on the Minnesota Occupational Scale; for similarity of father's school attainments within plus or minus one school-grade level; for similarity of mother's school attainments within plus or minus one school-grade level; for parents who were white, non-Jewish, North-European; and for residence in communities of 1000 or more. In spite of the rigor of these criteria, 194 pairs of foster and own children thus matched were found for study. Detailed information relative to cultural background

TABLE III

CHILD'S I.Q. CORRELATED WITH OTHER FACTORS[8] (SELECTED ITEMS FROM TABLE OF THIS NAME IN LEAHY'S "NATURE-NURTURE AND INTELLIGENCE")

Correlated Factor	*Adopted Children*			*Control Children*		
	r.	P.E.	N	r.	P.E.	N
Father's Otis score	.19	.06	178	.51	.04	175
Mother's Otis score	.24	.06	186	.51	.04	191
Father's Stanford-Binet vocabulary	.26	.06	177	.47	.04	168
Mother's Stanford-Binet vocabulary	.24	.06	185	.49	.04	190
Father's education	.19	.06	193	.48	.04	193
Mother's education	.25	.06	192	.50	.04	194
Father's occupational status	.14	.06	194	.45	.04	194

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[8] From Alice M. Leahy's *Nature-nurture and Intelligence*, Genetic Psychology Monograph, 17, No. 4, 1935, by permission of The Journal Press, publishers.

was secured for all children. For the adopted children, such information was found for both own and adoptive parents. Every child was given the Stanford Revision of the Binet-Simon Test, and each child over 10 years of age was also given the Woodworth-Mathews questionnaire designed to reveal psychotic tendencies. The parents were given the Otis self-administering test of mental ability and the Stanford-Binet vocabulary test. Only a few of the interesting statistics from this study can be reproduced here, but some of seemingly great significance are quoted. It can easily be understood that it was impossible to secure every item of data for every individual participating in the study, hence the variation in numbers of cases in the different correlations.

From this table it can be seen that the I.Q. of the adopted children bears little or no statistically reliable resemblance to the intelligence of their adopted parents as measured by the devices here cited. The I.Q. of the *own* children, on the other hand, shows statistically reliable positive correlation with these same measurements on their own parents. Dr. Leahy also studied the relationship of intelligence of children and the occupational levels of the homes in which they were living. She found that the I.Q.'s of the adopted children were very similar, regardless of the occupational level of the homes into which they had been adopted. Own children, on the contrary, were found to have increasingly higher I.Q.'s from the lower to the higher occupational rankings of their fathers. "The absolute difference in child's I.Q. between the extreme occupational levels in the Control Group is three times as great as the difference between the extreme levels of Adopted children." [9] In other words, the own children in the higher occupational levels of fathers were "distinctly superior in intelligence to the adopted children at the same levels." Dr. Leahy found that unrelated children living in the same households did not agree markedly in ability, as would be expected if their ability were determined by environment rather than by heredity. Dr. Leahy concludes that:

> Variation in I.Q. is accounted for by variation in home environment to the extent of not more than four per cent; 96 per cent of the variation is accounted for by other factors. . . . Measurable environment does not shift the I.Q. by more than 3 to 5 points above or below the value it would have had under normal environmental conditions. . . . The nature or hereditary component in intelligence causes greater variation than does environment.[10]

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[9] *Ibid.*

[10] *Ibid.*

Another approach to the question of the relative strength of nature and nurture is being made by Newman, Freeman, Bryan, Mitchell, and Holzinger in Chicago, on identical and fraternal twins. In one of the first reports emerging from this study (26), Holzinger writes as follows:

> (1) For intelligence, nature is about equally effective with nurture in producing mean twin differences, but nature is somewhat more effective than nurture in determining variability of such differences. Nurture influences would thus seem to play a large part in the modification of intellect. (2) In the case of scholastic achievement the relative influences of nature and nurture probably change with the trait. On the whole, nature would appear little, if any, more effective than nurture. The question has often been asked, "What per cent of a person's success in achievement is due to nature and what per cent is due to nurture?" Such a percentage comparison may be impossible and even meaningless, but the above results would suggest a 50-50 division rather than a 97-3 division as given by Courtis in his book *Why Children Succeed*.[11]

One is inclined to agree with Holzinger that percentage comparisons in such cases are impossible and meaningless and to wish that he had not resorted to the device himself.

In trying to evaluate this work of Holzinger, Shuttleworth (76) has recently made an exhaustive study of the aforementioned investigation of Burks. He chose the Burks study rather than the comparable one made by Freeman, Holzinger, and others because selective placement seemed to him to be less probable in Burks's cases and because Dr. Burks used a control group of own children equated as to environmental differences. The evaluation by Shuttleworth makes use of the *path coefficient technique* of Wright. The treatment is much too technical for explanation here. Suffice it to say that by the use of this methodology Shuttleworth finds necessary "only a minor refinement of the conclusions reached by Burks." He separates out "intra-family environmental differences" on the one hand from "inter-family environmental differences" on the other hand. The former are factors that might "cause even identical twins reared in the same family to have slightly different environments." The latter include such factors as family income, cultural status of home, and intelligence of the parents, which make the environment provided by one family different from that provided by another. His statistical treatment then causes Shuttleworth (76) to say of the Burks data:

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[11] From K. J. Holzinger, "The relative effect of nature and nurture influences on twin differences," *J. Ed. Psychol.*, Volume 20, 1929, pp. 241-248, by permission of Warwick & York, Inc., publishers.

> From 62.6 per cent to 66.0 per cent of the variance or individual difference in I.Q. is attributed to hereditary differences; from 2.6 per cent to 3.3 per cent of the variance is attributed to accidents and intra-family environment differences or to factors which make the environment of two children reared in the same family somewhat different; from 13.9 per cent to 17.6 per cent to inter-family environmental differences or to such factors as parental intelligence, family income, and cultural status of the home; and from 16.0 per cent to 20.9 per cent to the joint contribution of hereditary and inter-family environment differences or to the correlation between endowments and environments or to the fact that there is a tendency for nature and nurture to work together to increase or decrease the level of intelligence. . . . The data of Burks indicate very clearly that inter-family environmental differences account for a much smaller proportion (from 14 per cent to 18 per cent) of the variance or individual differences in intelligence than do hereditary differences (from 63 per cent to 66 per cent). . . . The inferiority complex which many educators and environmentalists have created for themselves by the misinterpretation of these and similar data (for recent examples, see Freeman, F. N., *Individual Differences,* New York: Holt and Co., 1934, 355 pp. Also Sanders, B. S., *Environment and Growth,* Baltimore: Warwick and York, 1934, 375 pp.) is a most bizarre phenomenon. It does not follow that the general level of the environment is a relatively unimportant factor in determining the general level of intelligence, but only that environmental differences are relatively small in comparison with hereditary differences in determining individual differences in intelligence. Even if environmental differences accounted for zero per cent and hereditary differences for 100 per cent of the individual differences in intelligence, it would still be true that the general level of the environment would be a most important factor determining the general level of intelligence.[12]

Thus ends a scholarly analysis of some of our most crucial data on the nature-nurture controversy.

Incidentally, Shuttleworth also had at hand a preliminary report of the aforementioned Leahy study. He remarks that the preliminary report "provides a most remarkable confirmation of Burks' findings." Interestingly enough, these conclusions stressing the prepotence of heredity were foreshadowed by one of Galton's studies many years ago. In his *Hereditary Genius* (18), published originally in 1869, he showed that the adopted sons of popes do not approach equality in eminence with true sons of gifted men.

Recently, numerous articles and statements from the University of Iowa have been to the point that the I.Q. can be very materially improved by attendance at a good school or by good foster-home placement. In the space at our disposal it is impossible to review or evaluate the data from which these claims emerge. As a result of the Iowa statements, one heard for a while of the "wandering I.Q.," and the public was led to believe that improved environment can cause the I.Q. to wander upward. It is hardly appropriate here to list all the studies from the University of Iowa on this controversial subject. Students who desire to follow through the maze of attack and counter-attack, to say nothing of statistical puzzles, may be interested in reading Burks (3, 4), McNemar (51, 52), Simpson (77), Skodak (78), and Wellman (92, 93), as well as further discussion in Chapter XII.

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[12] From F. K. Shuttleworth, "The Nature Versus Nurture Problem," *J. Educ. Psychol.,* Volume 26, 1935, Part I, 561-578; Part II, 655-681, by permission of Warwick & York, Inc., publishers.

For one who is concerned about assigning proportional roles to heredity on the one hand and nurture and culture on the other hand, as regards intelligence, there is plenty of reading that he can do. Whether he comes out of his library, after having read, feeling that he knows the answer, is, of course, another matter. Loevinger (45) devotes 31 pages to a review and an evaluation of the literature on the matter. Her bibliography includes 43 references. The National Society for the Study of Education has devoted a second one of its yearbooks to the subject (56). The Review of Educational Research devotes one issue about every three years to a summarizing of the then-current literature on psychological tests including discussions of heredity. The most recent one is that for 1944 (68). Robert L. Thorndike reviewed the "constancy" of the I.Q. in 1940 covering the literature for 1940. He cites 112 references (89). Woodworth (97) in 1941 made a critical survey of the heredity-environment studies of twins and foster children. He came through his survey feeling that the contribution of environment in such cases is so *small* as to be the "most striking feature of these results."

One is led to wonder a little about such exhaustive studies of intelligence in the light of heredity and environment. One wonders whether mental test measurements are sufficiently refined to permit such statistical refinements. One is also wont to believe with Haldane (22) that there is "no general answer, but rather a very large number of particular answers." For example, on the one hand, the writer has recently seen a very young child (early age introduces a statistical uncertainty in mental measurements that will be discussed in a later chapter) who showed a considerable rise in I.Q. after being changed from one foster home to another. On the other hand, there is the case of Jake. Jake was such a pathetic little crippled child that a clinician was tempted to violate test procedures and to keep hypothetical fingers crossed in order to give the child "a break" in the testing situation. When first examined in the clinic, he was 4 years and 11 months old. His Binet mental age was 3 years and 0 months, giving him an I.Q. of 61. This I.Q. would normally exclude Jake from the benefits of orthopedic treatment in an orthopedic hospital and school where his parents were hoping to place him. The clinician was unwilling to attribute too much predictive significance to this I.Q., however, for the following reasons: "The day Jake was here he had been wakened very early and had a long, tiresome trip in a bus; out of 4 years and 11 months of life Jake has spent a total of about 12 months in various hospitals; because of his parents' fear of childhood diseases, Jake has never been allowed to have any association with children his own age outside the family; his motor handicap has prevented his having any of the exploratory sensory and motor experiences through which little children do the most of their learning; Jake has been subjected in his home to two languages and may possibly have the bilingual confusion that sometimes results in little children under such circumstances." Jake was admitted to the school-hospital tentatively and was given the benefit of schooling, English, association with other children, and the best of orthopedic care. One year and three months later, his Binet mental age was 42 months, with a resulting I.Q. of 57 (a statistically insignificant drop in I.Q.) and a Merrill Palmer mental age of 48 months.

Clinical experience, years of statistical research, as well as observed correlation of intelligence test results with school progress, do not substantiate extravagant claims for the power of environment materially to change intelligence ratings on large numbers of persons. Nor do they give much reason to hope that society can materially improve intelligence by improving environment. Further discussion of this point will be found in Chapter XII. Suffice it to say that years of statistical research in regard to the I.Q. do not substantiate such claims, nor do other studies give the scientific student of these matters much reason to hope that society can materially improve intelligence by improving environment. Further discussion of this point is to be found in Chapter XII.

Consanguineous Marriage

Heredity is concerned with another question that occurs in social case work repeatedly. This is the matter of intermarriage within families, or *consanguineous marriages* (47). The social worker is all too familiar with the essentials of this problem, even with marriage left out. All too often, illegitimate births from incestuous relations give trouble enough to the case worker. In certain types of family with which the social worker is acquainted, a large amount of "promiscuous" sex relations occurs within the walls of the home. What of the offspring of such unions? Is the child of cousins, of brother and sister, or of parent and child penalized biologically because of his origin by interbreeding?

The answer to these questions requires consideration of two points —first, as regards germ plasm. Suppose it were possible to find a human family with no taints whatsoever. Suppose two closely related members of this phenomenal family were to marry and have a child. Since both parents would contribute to the child's heredity and since both parents have exceptionally fine germ plasm, the child would in such a case get a "double dose," so to speak, of all the good. Of course, what is statistically more probable is that even in otherwise good stock there will be some weaknesses. The child born of consanguineous marriage under *those* circumstances would get a double dose of the bad as well as of the good characters. In other words, consanguineous matings simply intensify whatever traits are potential in the germ plasm, regardless of whether they are good or bad. Therefore, one cannot say, a priori, that consanguineous matings are bad. In fact, there has been, historically, some excellent stock in which there has been considerable such intermarriage. The Ptolemies of Egypt furnish an example. Charles Darwin married his first cousin, and they had four very distinguished sons. There is always, however, not only the danger but even the probability that some weakness will be intensified along with whatever good there may be. The royal houses of Spain and of Austria are cases in point.

Our second consideration has to do with incestuous relations. Here exactly the same biological principles maintain. There is, in such cases, however, one added danger. That is to say, it seems a fair assumption that incestuous relations occur much more frequently in families already degenerate. Take the infant born to a 14-year-old girl who has been seduced by her father. Consider the child born to a 16-year-old who had been having sex relations with three of her brothers to the extent that she could not tell which was the father of her child. Certainly, such infants stand an excellent chance of getting a double dose of germ plasm which would not rate high on a eugenic scale.

Illegitimacy

The question is sometimes raised as to the relationship of illegitimacy and heredity. Biologically, of course, heredity knows nothing of "wedlock" or "out of wedlock." The fact that two individuals have become the parents of a child without having had a wedding ceremony has nothing whatsoever to do with the contributing germ plasm. The question might well be asked, however, as to whether the rate of illegitimacy is higher in one kind of stock than in another. There is probably no exact answer to that question. One might argue that so-called better stocks do not indulge so much in extramarital sex relations. Such an answer, however, is probably seriously confusing moral and biological excellence. One might further argue that better stocks would be more concerned about the social consequences of illegitimacy and might take more precautions to prevent it. This is undoubtedly true. It is also probably true that higher classes of society would have more opportunities for acquiring contraceptive information and be more intelligent in applying it. Furthermore, superior intelligences no doubt are more moved to legitimatize births, the conceptions for which occurred before marriage. They also are more likely to arrange to have illegitimate births take place at such institutions as will not reveal the real facts in the case. Such cases may never get into our census of illegitimate births. These factors probably tend spuriously to lower figures on such births among better stocks. In short, illegitimacy as such scarcely belongs in the field of genetic research. The question of illegitimacy will be considered again in connection with the study of adoption and foster-home placement.

One other question in regard to illegitimacy presents a puzzle, particularly to the social worker who is concerned with adoption. This is the matter of the heredity of the illegitimate child whose mother, in spite of intelligence that is average or above average in amount, has nevertheless had one illegitimate child after another. The writer has recently had two such cases referred by social agencies who were considering the suitability of the children for adoption. In the first instance, the unmarried mother is described in the social summary as a "dull, normal girl without neurotic phases." She completed the eighth grade and has had an excellent work record. "She was found to be unconcerned about the way in which she lives, except that the birth of each child gives her a great deal of worry," says the social worker. In spite of this "worry," she has had four children born out of wedlock. In the other case, a child was born to a woman who, as a child, had been adopted herself because of the desertion of her father. In her senior year in high school she had a forced marriage. This marriage was later broken by divorce. Since that time, she has had two illegitimate children. What can one say of the emotional stability of these two women, not feeble-minded, who continue to have children out of wedlock? Certainly their behavior does not classify them in any particular psychotic category, and yet such failure to profit from experience, such inability to see the consequences to their own illegitimate children, such willingness to fly in the face of the mores, is an indication of a weakness not explainable on the basis of intelligence. As a psychiatrist friend of the writer remarks, "They may not be psychotic, but there is something fundamentally wrong with their make-up someplace." What this weakness is and the extent to which it should be considered in recommending or withholding adoption for their children is a serious question that genetics cannot at this time answer.

One other phase of illegitimacy is of importance to the social worker. Other matters pertaining to the adoption of children will be discussed is a later chapter, but we must mention here that in the case of many illegitimate children one-half of their ancestry is an unknown quantity. There are some strict hereditarians who would question the wisdom of planning for adoption for a child about one-half of whose ancestry nothing whatever is known. Of course, in taking such an extreme position two points might be made. In the first place, there is the possible danger of undesirable but unknown hereditable traits in the child. In the second place, the point might be made that if the mother did not know who the father of her child was, she *herself* might be of questionable intelligence. There are others in the field of adoption who take a less extreme position in regard to unknown ancestry on the paternal side. They say that the less that is known of heredity, the more must be known about the remaining family history and the more must be known about the social history. Certainly, no one would challenge this position.

Social Work and Heredity

There is not adequate time and space at our disposal for a discussion of all assumed (and/or disputed) hereditary traits. A vast literature has accumulated on the possibility of the inheritance of temperament, linguistic ability, musical and other special aptitudes, left-handedness, blindness, deafness, color-blindness, numerical ability, and almost every other human capacity. Dr. Snyder's *Medical Genetics* (83) gives helpful suggestions in regard to preventive measures in families with certain diatheses and also examples of cases where marriage can or cannot be safely recommended.

While all the reading that one can do in the field of scientific research leaves one in doubt on many points, nevertheless, certain facts seem to be relatively well established. There is no doubt that there are large degrees of physical resemblance between parent and child, between siblings, and even between more remote kin. How far the same mechanics can go to justify belief in inheritance of mental or personality traits will depend for the most part on the degree to which it can be established that such traits are natural outcomes of *structures* known to be heritable. Even the veriest environmentalist will probably agree in essence with these statements. What, then, is the implication for the social worker, the visiting teacher, the nurse, or the clinician? If there are such great possibilities of inheritance, including that of undesirable traits, what can be done about it? Must one fold his hands and assume a fatalistic and laissez-faire philosophy? Let us look at some of these practical matters.

One of the questions of utmost importance in the field of clinical work and of social service is that of adoption. Since this question is so important and has so many aspects other than that of heredity, we shall leave the discussion of it to a subsequent chapter.

The experienced social worker and the visiting teacher will always have many questions that he or she would wish to have answered by the geneticists. There are always those families no member of which seems able "to do arithmetic" in school. The geneticist would probably ask the visiting teacher if she knows to what extent a family *tradition* has been built up by word of mouth about the terrors and the unreasonableness of arithmetic. He would probably inquire as to the extent to which the older members of the family condone the present generation's "failure" in arithmetic by saying, "*I* never could do it either when I went to school." Arithmetic has probably suffered more from this kind of abuse than any other academic subject matter. Other branches of study, however, raise similar questions. We often wonder whether there is not *more* than social inheritance involved. A case in point comes to mind of the boy past 12 who was brought into a psychological clinic for study. He was not getting along well in school. On examination, it was discovered that his mental age was less than 9 years, which goes far toward explaining some of his difficulties in the fourth grade. The mother was questioned about the school progress of the other sibling in the family. She reported that "Jack's sister got along swell in school." She felt that Jack was "not like his sister" and that he was "nervous." She thought there must be something wrong with him. Further questioning brought out the fact that Jack's sister had quit school in the *first year of high school* when she was *18 years old* "because she would get sick every morning just before she started to school!" One wishes that the intelligence of all members of that family could be rated.

The social worker sees personality traits "cropping out" in various members of the family (28). Many of these are highly suggestive, to say the least, of the operation of some as yet unformulated laws of heredity. Take the case of Mary L., referred to a psychological clinic for examination. The "reason for referring" was that, particularly since the birth of her illegitimate child, she had been more and more difficult to live with, was having violent fits of temper, and was altogether hard to understand. Her school record was essentially negative, except that her teachers reported that when she had attended school she had been the dirtiest child in the school and never made any effort to keep clean clothes clean. It is interesting to note the following paragraph in the *summary* presented by the social agency:

> Mrs. L., Mary's mother, has two sisters. One had an illegitimate child when 19 years old and was not married until the child was 12 years of age. Mrs. L.'s other sister indicated that Mrs. L. "was a person of limited abilities and perhaps should never have been married." She could give no definite examples of things she had done, but felt as a child she was not like other children. She was careless of appearance and had few friends, and she did not get along well in school. She had quite a temper and would become angry at small irrelevant things. She cried a great deal, and Mrs. L. herself has spoken of this. She says that every once in a while yet she will choke up and cry for ten minutes or so, though she does not know what she is crying about. Mr. L. on several occasions has called attention to the similarity between Mary and her mother in relation to their outbursts of temper and their actions.

Recently the clinic with which the author is connected was asked by a social agency for help with a family of four adult sisters. The family, through the mother's frugality, had been able to make out after a fashion, even though they had been "on relief" for a number of years. A very inadequate father, who had had an accident 18 years before and had diagnosed his own case as a "permanent" injury and had never worked since, also lived with the family. The married brother who "repeated grades in school" and "appears to be a man of dull intelligence" lived in a part of the same house. The social agency was interested in getting estimates of the intelligence of the sisters and in knowing something about their "ability to profit by training," since there was a serious question as to what would become of these girls who had no work history and who, as of the present at least, were utterly unable to support themselves if the mother should die or become incapacitated. The day for the clinic appointment arrived, and in came the mother and her four daughters, all dressed much alike and all considerably above average in height. The clinic staff were all interested in all the daughters, and each clinician did at least some psychometric work with each sister. The resulting picture was something that would defy any geneticist or environmentalist to unscramble. Both successful and unsuccessful responses were so similar from one daughter to another that one could not help wondering how much was due to common environment and how much to heredity. The following table (Table IV) gives a few items from the records of the daughters and a few from the mother for comparison. It goes without saying that the tests were administered to these clients individually without any one client's knowing what the others were being asked.

Such examples of similarity could be duplicated many times. How much of the resemblance is due to heredity as such and how much is due to learning and conditioning of the child through the behavior of the parent is very hard to say. One must always keep in mind, however, that heredity, like habit, "knows neither good nor bad." Good heredity is just as potent in impressing likenesses as is bad heredity. Similarly, good environment can exert power for good just as bad environment can exert power for evil.

It would take us too far afield from our interest in child psychology, perhaps, to go into details regarding eugenics (66), sterilization (39, 73, 94), and birth control. We cannot, however, have an intelligent social interest in childhood without looking some of these general principles in the face. The eugenics program rests largely upon *education*. Certainly no one can have any quarrel with that, unless it be that educating the masses sometimes seems like a discouragingly slow process. However, the sooner and the better we can educate the public to the necessity for wise selection of mates, the sooner shall we begin to see good results. Another of the educational difficulties lies in the fact that it is in the less intelligent groups of society that there is the greatest need for care in marriage and reproduction. This is just the group, of course, where an education program is least possible. The educational value of well-baby clinics or better-baby contests and such devices is probably extremely great, no matter whether it be a euthenic or eugenic value. However, we need much more help on an educational program than is available at present.

Table IV

FAMILY RESEMBLANCE IN TEST PERFORMANCE

	Mrs. B.	*Wilma*	*Kizzie*	*Ila*	*Flora*
	Quit school at 12. "Didn't like it."	Tremors. Tumor operation. Two auto accidents.	Tremor. Bad accident on stairs.	Tremor. Nervous vomiting. Four accidents. Nervous breakdown. Recently fifteen styes.	Nervous vomiting. Bad temper. Rupture. Spasms and fainting spells.
REVISED STANFORD-BINET TEST					
Age	62	36	34	31	22
Mental age		9 yrs., 2 mos.	7-6	8-8	7-6
Range on Binet		5-14	5-9	6-12	6-11
I.Q.		61	50	58	50
Binet vocabulary level		10 years	below 8	10 years	8 years
KENT TEST					
Mental age					
1st scale	10-10	8-4	7-7	7-1	7-1
2nd scale	10-6	9-2	below 8	below 8	below 8
3rd scale	10-1				
VINELAND SOCIAL MATURITY AGE	approximately 20 years	8 or 9 years	6 or 7 years	approximately 11 years	approximately 9 years
GOODENOUGH DRAWING A MAN TEST MENTAL AGE	omitted	6-3	5-3	7	5-7

Table IV—Cont.

FAMILY RESEMBLANCE IN TEST PERFORMANCE

	Mrs. B.	*Wilma*	*Kizzie*	*Ila*	*Flora*
MINNESOTA RATE OF MANIPULATION TEST					
Hand	omitted	Lowest 11 in 10,000	Lowest 4 in 10,000	Fast as 42% of population	Below lowest 4 in 10,000
Finger		Lowest 9 in 10,000	Lowest 4 in 10,000	Fast as 15½% of population	Below lowest 4 in 10,000
Arranging 3-6-9-12-15 gram wts. in order	− + −	− −	− −	− −	− −
Know the date?	omitted	+	+	+	+
No. minutes in hour?	+	−	−	−	−
No. days in month?	+	−	−	−	−
No. days in week?	+	+	+	+	−
Months in order?	omitted	+	+	+	+
Naming days in week.	omitted	+	+	+	+
Right and left side orientation.	omitted	+	+	+	+
Flag float to south, what direction is wind?	South	East	East	West	"Don't know"
Time at day shadow shortest?	"When sun goes down"	"When sun's out"	"Don't know"	"Toward evening"	"Evening"
Name some large cities.	"Georgia, Alabama, Pittsburgh"	"New York, Pittsburgh, Atlantic City"	"New York, Kansas"	"Egypt"	"New York, Paris, Allegheny, Crafton"

The remainder of the platform advocated by the eugenists is both positive and negative in nature. On the positive side, they feel society should encourage the birth rate among the biologically more fit. They, for example, are interested in provisions by which graduate students, professional women, and others of superior intellect and physique may be encouraged both to continue with their pursuits *and* to reproduce and rear families. On the negative side, they are interested in preventing reproduction by the unfit. In some cases this could be accomplished through sterilization; in some, by segregation during the reproductive period of life; and in some, through wider dissemination of contraceptive information. In other words, the eugenics program is concerned both with the elimination of the unfit and with the increased reproduction of the eminently fit.

On the everyday, practical side of eugenic matters, the experience of social workers and public-health nurses should teach us much. Anyone who has had field-work experience realizes the futility in many cases of leaving "directions" or suggestions and expecting them to be carried out. In subsequent places we shall attempt to show the relationship between many such examples and the degree of intelligence of the patients. Cautions, suggestions, and warnings often seem to fall upon deaf ears when marriage or "having more children" are the issues at stake. Emotional and personality traits likewise enter into many such situations to make wise "supervision" impossible. Some agencies today even allow their workers to refer clients to birth-control clinics. In all too many such cases, however, it is discovered that a wise following out of available contraceptive directions requires a degree of intelligence and a measure of serious and persistent coöperation that are utterly lacking. It would appear that at this point lies one of the greatest present-day needs. In other words, we must somehow develop methods by which to build up willing coöperation, if we are to prevent partial following of directions only, and to make both directions and techniques simpler.

In all fairness, we should consider another question. Let us suppose that our ignorance were even greater than it is. Further, let us suppose that we have a family where the parents are both feeble-minded and where there are already several inadequately cared for children. Suppose we do *not* know exactly how or to what extent the feeble-mindedness of these parents or of their offspring may be handed on to following generations. Does our ignorance have any bearing upon the question as to whether these parents should have any more children? The fact remains that these parents are not able to provide proper rearing for their present children. That should certainly answer the question. If parents cannot adequately care for and cannot properly train their children, they certainly should not have any more. This is true on euthenic grounds, even if we leave the question of eugenics out of account entirely.

Some time ago we referred to the question of the wisdom of intensive case work *if* heredity is so important a factor as some of the literature would seem to indicate. If the stock is bad, and if unsocial factors will almost inevitably appear anyway, is there any use of struggling to "build up attitudes," "develop better habit formations," or "bring about a new point of view"? It may not be far from the truth to say that the ability to know in which cases the answer is "yes" and in which ones it is "no" is one of the earmarks of real wisdom on the part of social workers. Unfortunately, there is no rule-of-thumb which can easily be handed on to the inexperienced or untrained worker. If there were, he or she could avoid both the *Scylla* of giving up hope of rehabilitating a family after the first few discouraging attempts, and the *Charybdis* of wasting time and money trying to do the impossible. "Socially inoperable" is descriptive of the latter. Heredity and environment may combine to produce wrong attitudes; bad habits; low-grade intelligence; bad health conditions; and absence of skills, sustaining tradition, and initiative. Probably the wisest decision in such cases is that little can be done except to keep things from getting worse. At least, improvements that are accomplished seem only to be temporary. One has the feeling that attempts at rehabilitation are like "pouring water down a rat hole." In many such instances, institutional care seems to be the kindest thing to the clients themselves and the fairest thing to society. One often sees just such conditions in regard to defective children when, all things considered, the wisest thing is to institutionalize the child rather than to try one of our all-too-few good foster homes. One has to be extremely careful, however, not to confuse this group of cases with either of two other groups. The first of these two is composed of those families who will probably always need some supervision, but who, at least, are able to *profit* by supervision. It is probably missing the point entirely to say that only that supervision is real which in time can be dispensed with. Undoubtedly, there is a certain percentage of families the country over who, because of intellectual, emotional, or physical reasons, will *from time to time* require guidance from a trained case worker. Budgetary matters, health measures, school attendance and adjustment, and emotional problems within the home will continue to present *new* problems with which the family is unable to cope alone. Such families, however, may not be a menace to society if carefully helped and may be reasonably happy and even more or less self-sufficient in some particulars. It may still be true that these families will not respond to *intensive case work*, and the sooner we recognize the fact the better for all concerned.

A third group of cases, perhaps not very different from the above group but distinctly different from our first, must be considered. These constitute those families or individuals where there is undoubtedly a familial diathesis for certain diseases, nervous conditions, or other pathologies. We have seen in our previous discussion that in many diseases there is evidence of hereditary factors. In some, even if there is a hereditary basis, severe disturbances in the environment constitute the precipitating factor. Certainly social work, education, and nursing may help to prevent the "precipitating factor." This is particularly true in regard to nervous diseases. Mental hygiene is largely an attempt to help people meet life so as to avoid the things that might otherwise produce a breakdown. Here surely the visiting teacher, the nurse, the social worker, and the psychologist can help largely in preventing the destruction that "hereditary bases" might otherwise occasion. Proper habits of living, observance of the rules of hygiene, wholesome ways of working and playing, and honest methods of evaluating oneself can, in a large measure, help heredity to develop its best rather than its worst potentialities.

In spite of heredity, or on account of it, there is still another class of individuals in whom we are interested. These are the ones to whom we have not done our duty until we have shown them that they can manage their own affairs. They may need some help before they can see this fact. To keep such individuals on a dependency relationship is much like keeping a child in a high chair so that he does not learn to walk alone. Many times it is possible to help individuals who are not favorably endowed by heredity in some particular. Sometimes the aid consists in helping to develop a constructive attitude toward the handicap. Along with this may go plans whereby the short side of one's nature will not be penalized, but on the contrary the better endowed side may be capitalized. Social, emotional, educational, and vocational plans usually all have to be considered in such cases. Every good case worker sooner or later has the satisfaction of seeing a former client who has overcome obstacles to the point that the case worker is no longer needed, indeed may never again be needed.

"Heredity or Environment?"

It is to be hoped that our professional layman will never be one of those who allow themselves to become embroiled in an argument as to "which is more important—heredity or environment?" It is hard to think of a more senseless controversy. A human being cannot live without an environment, and most certainly he is going to be changed for good or for ill by that environment. On the other hand, no individual can come into this world except by a method depending upon heredity. It makes not one whit of difference which of these two statements is made first. There may be specific instances, such as straight or curly hair, to take an extreme example, in which it can be said without fear of contradiction that heredity rather than environment holds the key. An equally extreme example on the other side might be whether a child "adds up" or "adds down" in arithmetic. His method, of course, depends entirely upon the teaching that his environment provides. If it were not true that heredity is of the utmost importance, then we should not care what baby a family adopts, so long as they like the baby. If it were not true that environment is of extreme importance, then we should just as soon allow *our* children to form all their friendships and their play habits in the slums. If it were not for heredity, we should not care who the father (or the mother) of our children was, so long as we, the parents, get along together. If it were not for environment, we should not bother much about sending our children to good schools. If heredity were of no consequence, we should just as soon have all the next generation born from this generation's feeble-minded and diseased, because we could cure them through environment. If environment were of no consequence, we should make no attempt to put *good* books, *constructive* moving pictures, *fine* music, *correct* English, *ethical* parental behavior in the paths of our children. Heredity and environment suggest an analogy to a door with a hinge. Having a hinge means that the door can be opened. Obviously, one cannot *open* a door that he cannot shut. Sometimes it is better to have the door open, and sometimes it is better to have it closed. A human being is a door hinged so that he *has* to swing into both heredity and environment. On occasion, the hinge will swing one way; on another, it will swing the other way. To try to argue that either factor is the *only* factor for consideration is to change a human being from a door with a hinge to a *hole in the wall!*

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Chapter III

GETTING THE CHILD INTO THE WORLD

Introduction

In the first two chapters we considered the principles of heredity as applied to human beings and particularly as they concern problems of education and social welfare. This discussion was all more or less preparatory to the introduction of our main interest, *the child.* It is now time for us to consider the entrance of the child into the world (7, 15, 27, 30, 31, 71, 76, 80, 92). Although the social and hereditary aspects of birth differ enormously from one individual to another, the physical aspects do not differ so greatly. This is not to say that there are no differences in ease or difficulty of birth or in mechanical means used, but, after all, these differences do not extend over a very long range. It seems strange, on serious thought, that so few individuals other than physicians, nurses, and mothers have ever actually witnessed the delivery of a child. It is rather too bad that hospital restrictions and family conservatism make this necessary. It would be an enlightening experience for every social worker, visiting teacher, and psychologist to see a few deliveries. Of course, it is possible nowadays, in some of our leading hospitals which serve as teaching centers, for properly qualified persons to see moving pictures of births. Moving pictures, at best, however, are a poor substitute for the actual event.

Superstitions about Pregnancy

When one considers the physical, to say nothing of the emotional concomitants, it is not surprising that pregnancy and birth have, through the ages, been accompanied by superstition and ritual (53, 57). Students of sociology are familiar, of course, with the *couvade.* This is the name given to a custom existing in different races of people at different times and even in some places today whereby the father tries to prove paternity. The connection of the mother and the child is obvious enough, but the role of the father is not so evident. The primitive mind is satisfied on this point, however, if the father shows the outward appearances of the mother's behavior. Hence the father assumes illness and is administered to as though he had gone through travail.

The couvade, with all its superstition and magic rites, is not to be confused with another idea quite prevalent even in modern times. One sometimes hears that a husband may suffer nausea or other discomfort at the same time that his pregnant wife is suffering. This is often cited as an illustration of an alleged magic physical connection between husband and wife. Now, no one denies that the husband is sometimes actually ill under such circumstances, but the explanation involves no magic. Where sympathetic relations and understanding exist between a husband and wife, it is but natural that a man become emotionally disturbed over suffering for which he knows he and his wife are mutually responsible but which he seems so incapable of sharing or alleviating.

If we are tempted to think of the couvade as a peculiarity of the male, we have only to consider so-called *hysterical pregnancy* or *pseudocyesis* (4, 75) in women to realize that the emotional grip of parenthood is too deep-seated to be confined to one sex alone. Medical literature, as well as history, gives us accounts of emotionally disturbed women who have insisted, even in the face of gynecological diagnosis to the contrary, that they were about to become mothers. Historically, a regency was at one time appointed by a ruling sovereign who died believing that his wife was pregnant and would have a child after his death. Later events proved that the pregnancy was a phantom pregnancy only.

The development of biological knowledge has gone far to rid the world of some superstitions. Many remain, however, to clutter up thinking and to interfere with prenatal care, delivery, and subsequent attention to mother and child. Of some of these we shall speak later. For the present, however, we may say that we are adopting here a strictly biological point of view. We are postulating that life comes only from pre-existing life.

Prenatal Development

In a previous chapter we attempted to show how the male and female germ cells contribute equally to the fertilized ovum. This discussion took us through the matter of *maturation* and *fertilization*. We are now ready to consider the next step in the path by which the child comes into the world. The fertilized ovum, about 1/125 of an inch in length, contains all the potentialities that the new individual will ever possess. Environment will develop some of these potentialities and will suppress others. It is important for us to realize, however, that the raw material is all there in the fertilized ovum. Furthermore, we must bear in mind that the power of heredity to stamp the individual stops at the moment of conception. Anything that happens to the developing child from that point on is environmental and not hereditary. In other words, a child has approximately nine months of environment before he is born. Perhaps this point will be clearer if we examine the difference between *hereditary defects* and *congenital defects*. Let us suppose a child belongs to a family with one of the defects mentioned in our previous discussion—lobster claw, for instance. The pattern for this anomaly is in the germ plasm and is therefore hereditary. On the other hand, take the case of a child from a normal heredity. Many things that produce deformities at birth can happen to the child *in utero*. Adventitious cords of amniotic tissue may become wrapped around one of its developing extremities—a hand, for example. If the hand is sufficiently strangulated by this means, the child will come into the world with a deformed hand which it would not have had except by an accident of uterine development. This defect is then a *congenital* defect, because it is present at birth; but it is in no sense hereditary. Similarly, a child may develop blindness because of infection taken into his eyes as he passes through the birth canal. This blindness exists at birth, even though it may not be detected, and is therefore congenital; but it is not hereditary. The child's germ plasm would not be capable of passing on this defect.

It may be well for us to scrutinize somewhat superficially the development of the child in utero. Such scrutiny will at least add to our appreciation of the beauty of nature's plan, and will, we trust, enable us to read hospital reports and certain other technical literature more intelligently. The minute, fertilized ovum, a tiny mass of protoplasm, possesses great powers of growth. In a short time it begins to increase in size. It soon reaches a size where further uninterrupted increase would result in death to the cell. This is due to the fact that the surface of the cell, in contact as it is with a nourishing surrounding medium, furnishes required nutriment and is growing in arithmetic ratio. The contents of the cell, on the other hand, which require the nutriment, are in the meantime growing in geometric ratio. A point is soon reached, therefore, beyond which this discrepancy would cause starvation. Nature has a very nice method for preventing such a catastrophe. She simply divides the enlarged cell into two cells. In each of the two resulting cells, this process restores the ratio between the nutriment-transmitting and the nutriment-requiring parts of the cell. Furthermore, the process accomplishes another end.

In order to understand this matter more clearly, we must examine the process of *mitosis,* or cell division. For the sake of simplicity of discussion, let us return to our convenient example of a species all cells of which contain three pairs of chromosomes. We are launching, then, a potential individual, the fertilized ovum for which contains three half pairs of chromosomes given by the father and three half pairs given by the mother. This fertilized ovum, within the body of the mother in the case of all higher forms of life, then contains the characteristic number of chromosomes. We have said previously that every cell within the body *also* contains the representative number. Mitosis provides the means for accomplishing this. In order to be properly oriented in our thinking about mitosis, let us re-examine for a moment Figure 3 on page 8. In Figure 3c we see the male and female nuclei with their haploid chromatin content about to merge. This fusion is finally completed, although not shown in the figure. The cell then begins to grow until it reaches the threatened starvation point just spoken of. Figure 8a picks up the story where it left off at Figure 3c.

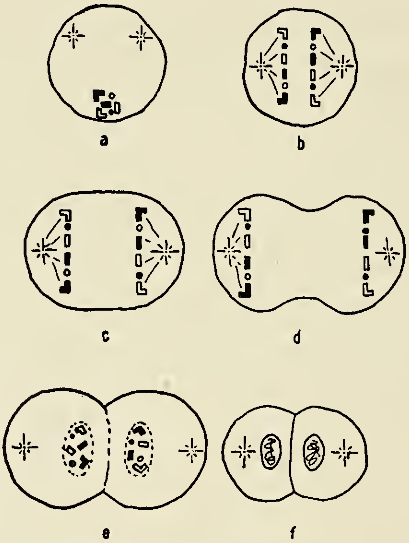


Figure 8—Cell Division.

The process of mitosis will result in the formation of two so-called daughter cells, each of which has the number of chromosomes customary to its species. The only means whereby this can be accomplished is for each of the existing chromosomes in the fertilized ovum to split itself lengthwise. In Figure 8a we see the first step in this process. Here we can count out 6 strands of chromatin. These are the 3 pairs spoken of before. In Figure 8b we can also see that these 6 strands are in the act of splitting. In Figure 8c and 8d the process has gone on so far that 12 strands can easily be counted. It must be remembered that these 12 are the result of the splitting of each of the 6 half pairs of the fertilized ovum. Figure 8c and Figure 8d show how the strands are separating out toward opposite poles. In Figure 8d and 8e the cell wall is beginning to constrict, and in Figure 8f we see two separate cells, with the chromatin back in its skeinlike form. Each of the daughter cells in Figure 8e contains the characteristic number of chromosomes again; half of the chromosomes in each of these daughter cells have been maternally derived and half have been paternally derived. In other words, the actual material contributed by the two parents has been divided so that each of these two cells and every other cell to be formed later in this particular individual will be a contribution from both parents and will contain the familial hereditary pattern.

Now, in the case of the human child, the process just described is the first stage in prenatal growth within the body of the mother. Eventually, through growth, each of the two cells shown in Figure 8f reaches a point of threatened starvation. Each of these two cells divides by the process of mitosis exactly as described before, and the result is four cells. From this point on, growth continues by division of cells, by increase in size, and by differentiation of the function of cells. For a time all the resulting cells look alike, but, after a while, certain ones in the mass are set aside for specific functions and begin to assume characteristic natures. As an example of such differentiation, we might mention the germ cells that form in this growing mass and from which, some 20 or 30 years later, still another generation will be produced. Differentiation into cells for an alimentary tract, a nervous system, blood vessels, arms and legs soon manifests itself. Within the first week or two of growth, the fertilized ovum develops into what is known as the *germinal disk*. Sometimes two centers appear on the germinal disk and each develops into a complete individual. These are the monozygotic twins of which we spoke in Chapter I. Beginning about the third week, the developing mass of cells is spoken of as the *embryo*. After a few more weeks of growth (authorities differ as to the time), the growing body is known as the *fetus*. At the end of approximately 40 weeks, there has developed a human child, with all the potentialities with which his own heredity provides him.

Recapitulation Theory

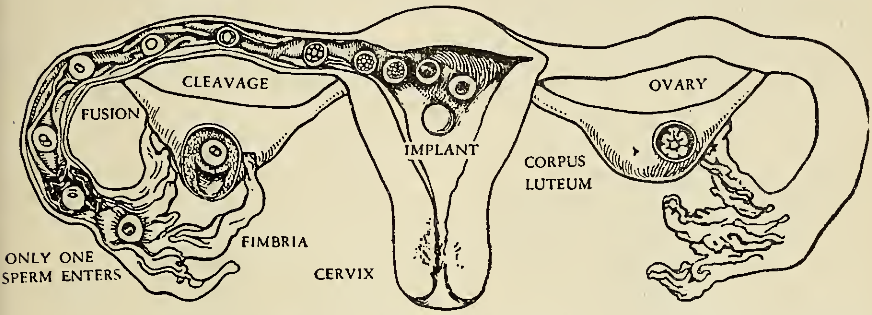
Rather because of their classical interest than because of their practical value, we shall stop in our discussion just long enough to mention two theories relative to development which have received more consideration than use would justify. The first of these is known as the *recapitulation theory* (13). The theory contains much truth for the student of evolution, but it has been greatly misrepresented and exaggerated by laymen. The simple truth of the theory, stripped of detail, is that nature uses much the same pattern for human development that she has used for ages for lower animal forms. In essence this is true, and an evolutionist could point out to us in the course of human embryonic development many points of similarity to lower forms of life. These facts, however, must never be so misconstrued as to lead one to think that a human being is, before birth, a fish or an ape or anything other than a *human* being.

Still other erroneous ideas have resulted in a second theory, known as the *culture epoch theory*. This theory is an attempt to carry, beyond birth, the same idea of duplication of pattern, except that in this case it involves cultural and social development rather than embryological development. Here the truth becomes much more diluted and obscure. The fact remains that, in broad general outline, a growing child is at first a rank individualist as selfish as primitive man in his first epoch of culture. Later the child becomes more socialized, as man did. In similar ways, certain other comparisons between individual or *ontogenetic* culture and racial or *phylogenetic* culture can be made. In very general terms and allowing for many exceptions, it may be agreed that "ontogeny recapitulates phylogeny." Modern education, however, has given up the idea of attempting to work out curricular schema on the basis of such comparisons.

The Child in Utero

To return to the development of the human child, we will remember that fertilization occurs within the body of the mother, usually in the *Fallopian tube* or *oviduct*. (See Figure 9.) Ordinarily, within a few days the ovum has divided into a mass of cells called a *morula*. The morula passes on into the *uterus*, where it continues to develop. Occasionally, the ovum fails to move on, and there results the condition known as *tubal pregnancy*. Complete fetal development in the tube is impossible and surgical removal is usually necessary in such cases. Publicity was given in the newspapers not long ago to the delivery of a baby, at the Pennsylvania Hospital, which had developed in an ovary instead of the uterus. The baby is reported to have lived. In rare instances fertilization occurs in the abdominal cavity.

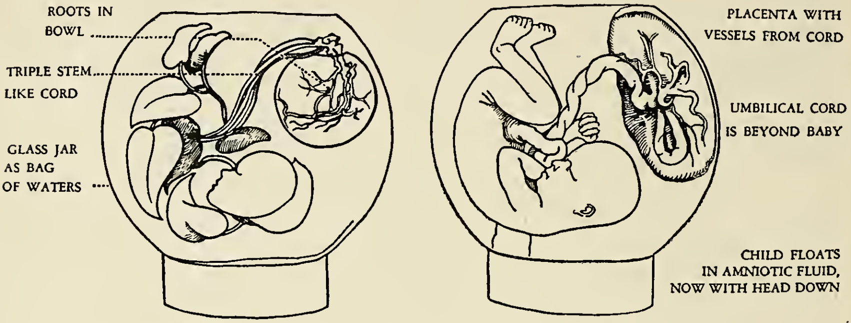
Great protection is thrown around the fertilized ovum from the beginning. It comes to be surrounded by the *amniotic sac.* Contained within the *amnion,* or "bag of waters," is the amniotic fluid, which acts as a great protection to the developing mass of cells. The amnion is surrounded by a second covering, known as the *chorion.* The chorion is covered with the *deciduae,* which are two layers formed from the mucosa of the uterus. The *placenta,* which is partly maternal and partly fetal in origin, is a flat, circular structure adherent to the inner wall of the uterus. The placenta, cord, membranes, and deciduae constitute the *"afterbirth"* which the obstetrician is so careful to have completely removed after the delivery of the child. Within the placenta are blood vessels. From the placenta these vessels pass to the child through the umbilical cord which is attached to the body of the child at the umbilicus, or navel. These features may be seen in Figures 10 and 12.



From Birth Atlas, *by permission of The Maternity Center Association, New York.*

FIGURE 9—THE SINGLE HUMAN OVUM SHOWN IN THIRTEEN STAGES ON THE WAY FROM THE OVARY TO IMPLANTATION IN THE UTERINE CAVITY: THREE DAYS IN THE TUBE; SIX DAYS ADRIFT IN THE UTERUS.

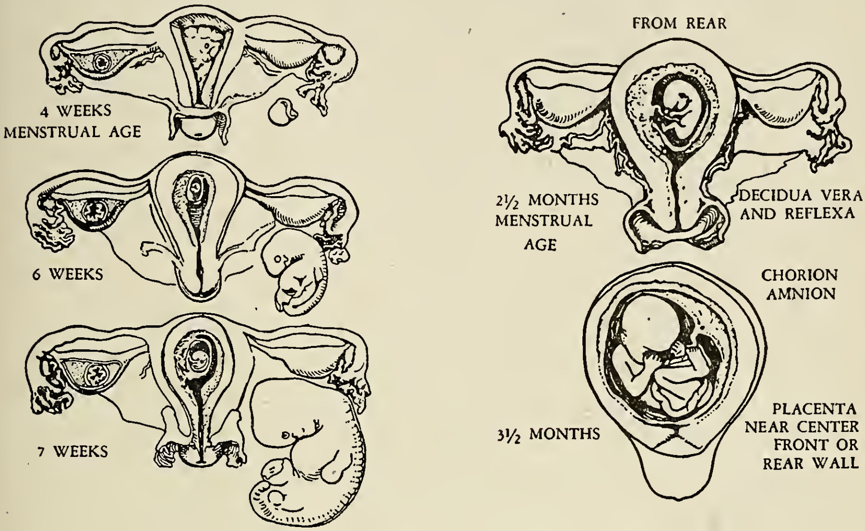
So important is an understanding of the blood supply of the developing fetus that we must stop at this point for a few particulars (7, 27, 71, 78, 80). The ovum, or egg cell, at conception contains a small amount of food material. As the fetus grows, the store of nutriment in the egg yolk soon becomes inadequate. Other provisions must then be made. Such is accomplished through the placenta, cord, and the blood vessels contained therein. This mechanism really then takes care of nutrition, respiration, and excretion for the fetus. It must be distinctly understood that the blood of the mother does not pass directly through the vessels of the fetus, nor in turn is the reverse process true. On the contrary, through the very thin walls of the capillaries in the placenta, nutriment passes by osmosis over into the blood of the fetus. Conversely, the waste products of the fetal circulation are carried through the cord until they reach the capillaries in the placenta. Here, by osmosis, they are absorbed into the maternal circulation. In other words, there is no "continuous" circulation. Mother and child possess independent circulatory systems having only a functional connection through thin capillary walls. It must furthermore be kept in mind that there are no nerves in common between fetus and mother. In other words, between the conception and the birth of the child, the only way by which the mother can affect her developing child is by whatever substances she gives or fails to give via her blood in the placenta. It is most important that we understand this process. It is illustrated in a diagrammatic way in Figure 10.


ROOTS IN BOWL
TRIPLE STEM LIKE CORD
GLASS JAR AS BAG OF WATERS
PLACENTA WITH VESSELS FROM CORD
UMBILICAL CORD IS BEYOND BABY
CHILD FLOATS IN AMNIOTIC FLUID, NOW WITH HEAD DOWN

From Birth Atlas, *by permission of The Maternity Center Association, New York.*

FIGURE 10—THE BABY GROWS LIKE A PLANT. ILLUSTRATION OF FETAL CIRCULATION.

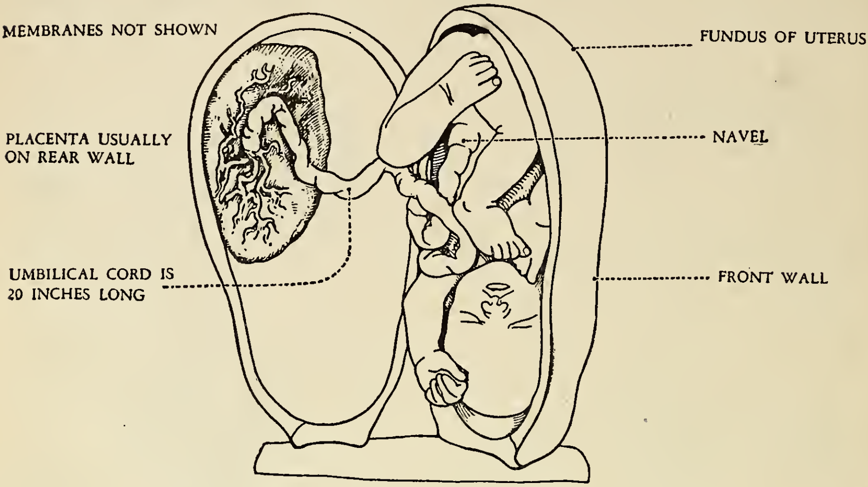
There are undoubtedly differences in the speed with which individual fetuses develop. A comparison of fetal development in various textbooks indicates this. On the whole, the following statements are fair averages of fetal development, month by month. (See Figures 11 and 12.) By the end of the first month of development, the embryo is approximately ¼ inch long. Various organs are developing into discernible form. Before 2 months, the limbs are developing; a tail is noticeable; webbed fingers and toes are showing; outlines of the face are visible; and the eyes are lidless. Movement occurs at about the end of the second month. By 3 months the fetus begins to resemble a human being much more, even though the head is disproportionately large. The kidneys begin to function and sex organs are developing. During the third month the mouth opens. The fetus may weigh about an ounce and may be about 3 inches in length. During the second and third months of gestation, miscarriage is particularly liable at the time menstruation would have occurred had not pregnancy taken place.



From Birth Atlas, *by permission of The Maternity Center Association, New York.*

Figure 11—Fetal Development (⅓ Life Size).

By the end of the fourth month, the eyes and nose are quite evident, but are still closed. By this time also, sex organ differentiation has already taken place and the teeth are forming. We need not go into detail as to other developmental features, except for a few *mile posts.* One of these might be called the "half-way point"; it occurs at about 4½ months of development, when the parturient woman usually feels the movements of the fetus, or "feels life" (*quickening*). At about the fifth month, hair begins to appear on the head, and nails are beginning to form. By this time, the fetus usually weighs 9 or 10 ounces or more. A fetus, delivered at 6 months, may live for a very short time, although 7 months is known in vital statistics as the age of viability. Before birth, the complete equipment of nerve cells of the brain is present. That the nervous system is functioning, at least after a fashion, can be demonstrated by the fact that the fetus will respond both to sound and touch stimulation from the outside world. The heart beat (or more than one in the case of multiple pregnancies) can be detected from about the fourth or fifth month. At 6 months the eyelids are still closed, but by 7 months they are open. From 7 months on (see Figure 12), no great changes take place, but the fetus develops in size and strength (40, 41, 42, 43, 44).


MEMBRANES NOT SHOWN
FUNDUS OF UTERUS
PLACENTA USUALLY ON REAR WALL
NAVEL
UMBILICAL CORD IS 20 INCHES LONG
FRONT WALL

From Birth Atlas, *by permission of The Maternity Center Association, New York.*

FIGURE 12—AT SEVEN MONTHS THE BABY STILL LOOKS OLD AND WRINKLED. IT IS LIKELY TO LIVE IF BORN AT THIS TIME AND GIVEN PROPER CARE (⅓ LIFE SIZE).

While, in general, the developmental stages just referred to are presumed to be fairly uniform within the race, there are always difficulties in the way of determining the age of a fetus. There are even disagreements within the field of medical literature as to the age of fetal development beyond which life after birth is possible. Furthermore, there is always the difficulty of determining the exact time at which the sperm and ovum united, since this union differs in time from one case to another so that, even if the date of intercourse were definitely recorded, the interval between it and conception would still be an unknown quantity. Besides all these problems, there seems no reason why individual differences should not apply to prenatal as well as to postnatal life. There are many examples of these differences as, for instance, recorded cases of intra-uterine crying (28, 48). Certain it is that most babies do not cry until after birth, and some not even as soon after birth as we should like. Furthermore, there are many evidences of development that are not obvious to naked-eye observation. For example, the first teeth of the child are already in the jaws at birth, although, of course, they cannot be seen through the gums. In fact, Dr. Richardson (73) says:

> The tooth-buds of the baby's permanent teeth are being laid as early as the fifth week of pregnancy. . . . Many a woman does not suspect that she is pregnant at this very early date, yet the teeth of her unborn child—his permanent teeth, not his baby teeth—have begun to form.

It is never the business of the social worker or the nurse to attempt a refined estimate as to the length of prenatal development. Of course, we can rest assured that a baby weighing seven pounds or more at birth, and having hair, nails, open eyelids, and the ability to cry and suck, was conceived more than four or five months previously. Much social harm can come, however, from attempts of laymen to determine the exact age of a child at birth, particularly in cases where scandal has already blown its hot breath around mother and child.

Sex Determination

One matter of extreme importance and interest in connection with fetal development is the matter of sex determination and sex differentiation. With our present knowledge of the biology of reproduction, we know that sex is determined at the moment of conception. This does not mean that a geneticist could at that moment announce to the prospective parents whether the baby would be a boy or a girl. It does mean, however, that the sex of the fertilized ovum is already determined. An inquiry into the determination of sex takes us back to the chromosomes in the sperm and the ovum. The two members of *one* pair of chromosomes in the sperm are not exactly alike. They differ somewhat in size and in shape. One of these is called the X chromosome and the other the Y chromosome. Now, the two members of the corresponding pair in the ovum are alike. They are called the X chromosomes. In other words, the male germ cell has an X and a Y chromosome, whereas the female germ cell has two X chromosomes. In the maturation reduction, the female will both cast off and retain an X chromosome. The male, on the other hand, may cast off the X and pass on the Y chromosome. In that case, the Y chromosome will unite with an X from the female. The offspring will then be XY, and therefore be male. On the other hand, if the male casts off the Y and passes on the X, the resulting offspring will receive an X chromosome from both parents and will be XX or female. Little is known about the factors governing the fertilization of a female X chromosome by a male X *or* a Y chromosome. Various theories have been advanced, none of which seems to be entirely satisfactory. The fact remains, however, that more male than female births occur, the ratio being about 106 live male births to 100 live female births. Miscarriages, likewise, are more common among male than female children, which would make the ratio of male *conceptions* even higher than the aforementioned figure. Considerable speculation also centers around the fact that male births tend to increase in ratio during times of war and economic or psychological depression. Here again, numerous theories have been formulated, theories that, however, leave us with little certainty except that the phenomenon is *not purposive* so far as nature is concerned.

So far as science knows, there is nothing that can be done to regulate the sex of the child. Sex differentiation can be recognized, however, in fetuses delivered as early as the third or fourth month, or even earlier. Various methods of ascertaining the sex of the child have been tried. Since comparable bones begin to ossify earlier in girls than in boys, it has been thought that X-ray examination of these bones would give the desired answer. Differences in fetal heart beat have been claimed by others to be distinguishing criteria. However, the wide range of individual differences among fetuses seems to make all such pronouncements quite fallible.

In connection with the sex of the child, there arises a question of the greatest psychological significance. For various reasons, prospective parents sometimes feel, and even express, a decided preference for a child of one sex or the other. It would be well for all concerned if such parents could hold their preference in leash, as it were, so that disappointment would not result, for this may greatly color their attitude toward the child. We have heard of cases where parents gave a name belonging to the *desired* sex, chose clothes and styles of hair cut or hair dress as wish fulfillment on their part when nature had seen fit to send the wrong sex. Such cases, of course, are bad in the extreme. They can result only in poor mental hygiene on the part of the child. Furthermore, one can easily surmise that parents who are so unwilling to face reality in this particular will be poor parents in other matters also. Such parents would do well to read Edgar Guest's little poem called *Boy or Girl* (29).

Signs of Pregnancy

In addition to the well-known signs of pregnancy, science has developed certain tests for determining whether or not a woman is pregnant. The Friedman test is made by injecting the urine of a woman into rabbits and noting the reaction. The Aschheim-Zondek test uses mice, instead of rabbits, in the same way. If the woman whose urine has been used is pregnant, definite reactions are produced in the animals. These tests are said to be reliable within six weeks after the ovum has been fertilized. Other tests for the same purpose are being standardized. X-ray examination will reveal pregnancy after about the third month (7, 12, 71, 80).

Prenatal Anomalies

The changes brought about within the body of the mother during pregnancy are, of course, of considerable magnitude. We must needs consider two phases of these changes very briefly, namely, diseases that may be detrimental to the health of the mother, and perhaps secondarily to the fetus; and mishaps and arrests of development that may occur to the fetus itself. We shall consider the first of these questions first. Since our interest is in the psychology of the *child,* we shall merely mention the fact that the mother's health may be impaired by the complications of *toxemia* or poisoning which, if severe enough, may produce the convulsions of *eclampsia.* Kidney and heart conditions are very likely to develop also. Of course, there is no reason why a pregnant woman might not have almost any disease. The point in which we are particularly interested is that when the diseases are severe enough both mother and child may die. Furthermore, any disease that produces deleterious blood changes in the mother may thereby exert some influence upon the unborn child. If, over a period of considerable time, the substances which go through the mother's circulation to the placenta, and then by osmosis into the fetal blood stream, are abnormal or carry infection, the nutriment furnished to the child is necessarily changed thereby. It is a medical matter, of course, to determine *what* changes will occur in the child. Recent news magazines have quoted medical statements relative to reports from Australia of large numbers of children born to women who had had German measles in the early days of their pregnancy. The children at birth showed definite signs of pathology, including cataract, heart conditions, and general physical as well as mental weakness.

In the preceding chapter, mention was made of the evidence from studies made within recent years (19, 20, 59) that the extensive application of roentgen rays to a pregnant woman may affect the child. Murphy, Shirlock, and Doll (60) feel that, in their cases, there is a definite connection between such irradiation of the mother and microcephaly in the child. The latter is a condition in which the head, particularly the cranial cavity, is abnormally small, with accompanying mental deficiency. We perhaps cannot be sure in such cases how much of the defect in the child has been caused by the irradiation of the mother and how much has been caused by the condition in the mother that made the treatment by roentgen ray necessary in the first place. However, in some such cases the cause of the irradiation was attempted abortion.

There is an altogether too common belief to the effect that a woman loses at least one tooth for every baby. The truth is that the fetus *will* have lime. If this is not provided through the food intake of the mother, it will be extracted from her system otherwise. Regular following out of the physician's suggestions in regard to the mother's diet makes such sacrifice altogether unnecessary.

In addition to these conditions in the mother, to which should also be added endocrine gland disturbances, there are certain anomalies that may occur in the developing child. We have already mentioned the fact that some of the positions which the constantly moving fetus assumes in utero may be unfavorable both for proper development and for ease of birth. Strangulation of some part of the fetal body by adventitious cords of amniotic tissue has been mentioned. There are other accidents also, resulting in congenital defects, which we shall mention briefly. Occasionally the spinal canal, which ordinarily closes during the first month or so of development, thus making a hollow tube, fails to do so at some point. When this occurs, a condition known as *spina bifida* results. Spina bifida takes several forms which we shall not regard here, except to say that sometimes it is associated with other deformities.

During subsequent months of fetal development, arrest at certain other points may result in harelip, cleft palate, and umbilical hernia. These anomalies, which are caused by cessation of fetal growth, are those to which the term *arrest of development* should be confined. Occasionally, someone is heard to speak erroneously of a feeble-minded child as a child with "arrested mental development." *Arrest* suggests a stopping. In the case of fetal arrest, this is exactly what does occur. Development at that point stops, and progress is never resumed. In the case of mental deficiency in a growing child, however, intelligence has not been stopped too early; it is merely developing slowly, more slowly than normal. From facts available at present, it appears that all degrees of intelligence cease growing at some time in early adolescence. Therefore, those minds which have developed slowly never reach the limits obtained by superior minds.

Accidents at Birth

In addition to the conditions mentioned above, there are birth injuries that produce fractures and dislocations. Difficult delivery may result in broken bones in the arm or the leg of the child, or in the dislocation of joints in arm or leg. Of course, it is very necessary that these accidents be recognized and treated. Delay in doing so may result in permanent deformity that could have been avoided. Orthopedic surgeons tell us that undoubtedly many permanently crippled children need not have been so if their condition had been discovered and treated soon enough. Birth injuries to the nervous system we shall discuss later (14).

Birth Marks

One other phenomenon should concern us because of its connection with the mental hygiene of the child. That is the matter of *birth marks*. Birth marks are of many different kinds, but commonly are deposits of pigment in the skin. Often there are large red splotches on the face or in some other conspicuous place. Large moles, in some cases covered with hair, are birth marks also. The cause of these anomalies, as a rule, is not known. In many cases they can be treated or removed. It would certainly seem only fair that every human being should be provided with such treatment. There is perhaps nothing that presents more of a hazard to the development of normal personality than a conspicuous disfigurement. This is not to say that they *necessarily* produce bad mental hygiene. No doubt, we all have known cases where this was not true. However, life holds obstacles enough for most people to overcome without the continuance of those which might be removed through someone's interest or someone's skill.

Antepartum and Postpartum Care

Needless to say, the changes going on within the body of the mother during pregnancy are very great. These changes are linked; that is, changes occur in the mother according to, and in preparation for, changes within the fetus. Lactation, for example, ordinarily does not begin until the child is born and is ready for food. It is not to our purpose to go into detail as to these changes, particularly those of a physiological nature. It does, however, become our duty at times to take steps to have the mother realize the importance of these changes and consequently to put herself in the way of prenatal or antepartum care. There are several points to bear in mind in connection with this matter. One of these is that it is highly desirable to prevent, if possible, a pregnancy or childbirth phobia.

Figures for maternal mortality are steadily decreasing in this country. In the first edition (1940) of this text, for example, the maternal death rate in the United States was 5.7 per 1,000 live births. According to the Statistical Bulletin of the Metropolitan Life Insurance for August, 1944, the figure for 1942, the latest data available, is about 2 per 1,000 live births. A large measure of this reduction in maternal mortality, it is claimed, is due to the use of sulfa drugs in cases of puerperal septicemia (infection in the uterus or birth canal). The Statistical Bulletin says further: "It is a disturbing fact that even now a large proportion of the women who die in maternity succumb to causes which are preventable." Many of those included in these figures die from complications arising from abortion. Fatalities from this cause in 1942 numbered over 1,200, according to statistical reports, but undoubtedly the *actual* number is considerably larger. Social workers and public-health nurses are, of course, concerned about the fact that maternal mortality among Negro women is 2½ times that for white women. Since this condition can be changed by better prenatal care and better obstetrical service, workers in this field have a wonderful opportunity for reducing maternal mortality still further. Rand, Sweeny, and Vincent (71) give comparative figures for maternal mortality in certain city areas where prenatal care is provided. The figures show that where pregnant women avail themselves of such care, their death rate is 2.4 per 1,000 live births, whereas, in the same district, where available care is not accepted by the women, their death rate mounts to 7.5 per 1,000 live births. Prenatal care is improving as knowledge of drugs, vitamins, and the like increases. The administration of vitamin B in cases of persistent "morning sickness" and excessive vomiting, and the administration of vitamin K to prevent haemorrhagic conditions, are but two examples. Many hospitals having adequate social-service departments provide case-work treatment to mothers attending prenatal clinics where there is any evidence of increased blood pressure. From the obstetrical point of view, "tension" and high-blood pressure present obstetrical hazards. From the case-work point of view, they are signs of disturbed emotional conditions that may be amenable to case-work therapy. In short, many complications can be avoided by regular urinalyses, heart examinations, pelvic measurements, and other examinations. All evidence indicates that the maternal death rate is lowered from one-half to two-thirds where adequate prenatal care is available and is accepted.

Several factors may enter into the reluctance of women to accept antepartum care. One of these is the fact that the woman may not be feeling well anyway, and a trip to a clinic is just one thing more to do. Someday, it is to be hoped, that, even though experts *are* donating their time and services for clinic patients, workable schedules can be arranged so that patients will not be kept waiting hour on end for services that may be good for them, but the value of which they may not entirely understand. Much remains to be improved in the matter of the psychology of clinic service of all kinds.

Another difficulty in prenatal care has to do with the prolonged period over which it must be extended. In this respect it much resembles the treatment for venereal disease. Many patients start out bravely enough, but lose the goal-idea before many months have elapsed. Nowhere, perhaps, is greater skill needed by the nurse and the social worker than in keeping alive continued coöperation in such cases.

Another difficulty in securing attendance at prenatal clinics is often found among multiparae (or multigravidae); that is, women who have already borne children. The woman may feel that parturition is harder for the primipara (woman having her first child) and that, since she herself has already had the experience, she does not need prenatal care for her subsequent children. This belief is unfounded. Although it is probably true that the first delivery is usually the most difficult, that in no way removes the danger of possible heart, kidney, or other involvements in subsequent pregnancies.

While we are speaking of prenatal care, it may be well to mention also the responsibility of the woman for postnatal or postpartum care. The time at which she should return for post-delivery examination will depend upon circumstances and upon the judgment of the obstetrician. Such an examination, however, should be made as part of the routine, following miscarriages as well as normal deliveries. Too much stress cannot be put upon this point (7, 8, 9, 47, 55, 61, 73).

Now, although it is necessary to insist upon prenatal care, it must also be borne in mind that many women need to have the *normality* of delivery stressed. In all cases where there appears to be a developing fear and dread of childbirth, great care should be taken by all those in contact with the woman to avoid harrowing tales, rehearsal of death notices, and the like. Maternal death rates have decreased materially since the old days of "child-bed fever." The sulfa drugs have contributed materially to the reduction of such conditions. Modern use of anesthetics has done much to rob the occasion of its long hours, even days in some cases, of suffering for the mother. Modern obstetrical hygiene emphasizes the value of a woman's continuing her ordinary routine, within limits, and recommends her participation in many of the usual salutary pastimes. The social worker and the nurse may help largely in keeping up wholesome morale during pregnancy. Fortunately, also, there are available many fine pamphlets (8, 9, 55, 61, 62); books (7, 15, 31, 47, 71, 80, 86, 91, 92); and series of letters (51, 73) for the expectant mother. Some of these are listed among the references at the end of this chapter. In addition, a number of commercial firms have issued attractive pamphlets and booklets which are very good. The prospective father has his own reading matter now also (6).

Although this printed matter is very fine for most women, discrimination must be shown in its use. To have books or pamphlets lying around which can be picked up *too* often may be unwholesome for some women. Some others are almost sure to get the wrong interpretation from the printed page and would profit more from personal instruction. In such cases, the suggested readings may be of more help to the social worker or nurse than to the woman herself. Certainly, all those who are trying to help prospective mothers should be familiar with some of this literature.

Any help that can be found to make the period of pregnancy happier and more uneventful is of service, for at best the time is difficult enough. On the physical side there may be, and very often are, 6 weeks or so of nausea or "morning sickness", vomiting, drowsiness, unusual appetite cravings, backache, spots before the eyes, and swellings in various parts of the body. On the emotional side, there may also be economic anxiety about ability to care for the coming child, unwillingness to have a child, or disagreement between the prospective parents regarding the child. Sometimes the situation is needlessly complicated by domination of "in-laws" who sooner or later must be told about the coming of a baby.

Attitudes Toward Pregnancy

A few years ago, Hall and Mohr (32) made a study of the mental hygiene of pregnancy. They report interviews with 66 primiparae. Of these, 43 had not planned their pregnancies. One was pregnant, in spite of her own opposition, at the insistence of the husband; 22 had planned for conception to take place. It does not necessarily follow that a child is unwelcome just because his birth had not been intended, but it does seem rather obvious that, other things being equal, a child is launched into a rather better emotional milieu when his coming is desired. Of Hall and Mohr's 66 cases, 11 of the women had fully accepted their pregnancy, 41 had become reconciled to it, and 14 were still not reconciled. Of the fathers, 50 were reasonably enthusiastic, and 16 were objecting to their wives' pregnancies. Conditions favorable to the development of good mental hygiene in the child are certainly enhanced when the child is a "wanted child."

The study by Hall and Mohr throws into bold relief many bad mental hygiene factors operating in these mothers. Economic fears, superstitions, racial or religious conflicts, parental disapproval, dislike of children, and fears concerning heredity were present. Imagine the state of mind of one woman who had cried most of the time during her pregnancy and who, in addition, feared that her baby *therefore* would be a "cry-baby"! Or the woman who feared that her child would resemble its father! Consider the pathetic ignorance of the one who had married her own cousin and asked if children born of first cousins are considered illegitimate! When we remember that these social and emotional pathologies were all brought to light on only 66 cases, it is easy to see that an enormous number of such distortions of thought probably exist. In the face of these facts one certainly finds support for a belief in voluntary control of pregnancy and in preparental education (16, 24, 25, 26, 58).

Undoubtedly, the mental hygiene of the pregnant woman and her attitudes toward pregnancy, delivery, and parenthood play a conspicuous role in the birth process itself and in the subsequent handling of the child. Jones (50) says that in delivery the woman shows her "true character." He feels that if the woman's life is harmonious and loving there are less chances of obstetrical complications than if the woman's life is disturbed by "hate, resentment, envy, and fear." Any obstetrician will testify that there are great differences in the degree of coöperation shown by mothers during delivery. Psychology and psychiatry have much yet to learn as to methods of building up attitudes in the mother that will be helpful not only during delivery but also during the nursing period and later (11).

A fine beginning in this direction has been made and reported by Margaret Fries (24, 25, 26). Psychotherapy with both parents, where needed, before the birth of the child, studies and moving pictures of the conditions of the birth process, frequent examination of the child after birth, and long-time follow-up studies furnish material for a "diagnosis and prognosis procedure" that, it is hoped, will throw much light on "satisfactory total development."

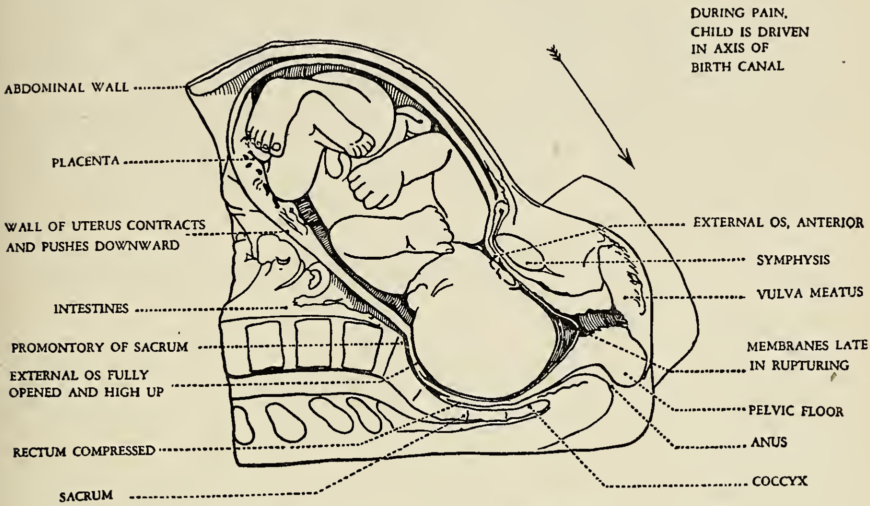
In some cities—Pittsburgh, for example—classes for expectant mothers discuss not only matters of prenatal care, infants' clothes, diet, and the like, but also take up matters concerned with the mental hygiene aspects of pregnancy. In many places, also, there are classes or at least lectures and demonstrations for prospective fathers (6, 10).

Mühl (58) feels that there is possibly a connection between emotional maladjustment during pregnancy and later enuresis in the child. Of the mothers of 250 preschool children studied by Mühl, 36 per cent are reported to have been emotionally maladjusted during pregnancy. Of the 250 children studied, 20 per cent had enuresis. Of these enuretic children, 60 per cent belonged to the group of mothers who were emotionally disturbed in their pregnancy. It is hard to interpret these findings. Age limits within which to diagnose enuresis differ, for one thing. Furthermore, the enuresis of the child may have had no direct relationship to pregnancy maladjustment as such. There are probably more enuretic children in the families of mothers who are emotionally disturbed *after* the child is born, *as well as before,* than there are in families where the parents are emotionally poised.

Determining the Date of Delivery

Our consideration of pregnancy leads naturally to the matter of birth itself. As we have said, it is difficult to tell at just what stage of his development a child has been born. It is likewise difficult to determine exactly the time at which a child *will* be born. As a rule, pregnancy continues for about 280 days, the equivalent of 9 calendar months or 10 lunar months. Needless to say, circumstances cause considerable variation in individual cases. As we shall see later, some prematurely born children can and do overcome the handicaps of their prematurity. On the other hand, some children have undoubtedly been born at dates considerably past the normal time for delivery.

There are several ways by which the approximate date of birth may be determined. The commonest method is to determine the beginning date of the last menstrual period. From this date, substract 3 months and add 7 days. Since there are 12 months in a year, subtracting 3 months is simply a short cut for finding (in the following year) the ninth month in advance. For example, suppose the last menstrual period had begun on September 10. Nine more months will take us to June of the following year. (The short way is to say "3 months before September is June.") By adding 7 days to allow for the menstrual period, the date changes from the tenth to the seventeenth, and so June 17 becomes a fair approximation of the confinement date. Nurses and physicians have obstetrical calendars from which confinement date can be read off immediately from any given menstrual date.


DURING PAIN. CHILD IS DRIVEN IN AXIS OF BIRTH CANAL
ABDOMINAL WALL
PLACENTA
WALL OF UTERUS CONTRACTS AND PUSHES DOWNWARD
INTESTINES
PROMONTORY OF SACRUM
EXTERNAL OS FULLY OPENED AND HIGH UP
RECTUM COMPRESSED
SACRUM
EXTERNAL OS, ANTERIOR
SYMPHYSIS
VULVA MEATUS
MEMBRANES LATE IN RUPTURING
PELVIC FLOOR
ANUS
COCCYX

From Birth Atlas, *by permission of The Maternity Center Association, New York.*

FIGURE 13—LABOR. THE HEAD IS DEEP IN THE BIRTH CANAL. THE PULL OF UTERINE CONTRACTIONS DRAWS THE CERVIX UP (⅓ LIFE SIZE).

The Birth Process

Very few details of the actual birth process need concern us here (7, 54, 80). In order, however, to read hospital reports intelligently, it may be well for us to understand a few terms. The passage of the child through the birth canal and into the world is spoken of as *presentation.* The usual way by which the child enters the world is for the top and back of the head to be delivered first, as illustrated in Figures 13, 14, 15, 16. This is called *vertex presentation.* In *transverse presentation,* the fetus lies crosswise in the uterus. Sometimes the buttocks appear first and the legs are delivered before the head. This is a *breech presentation.* Many obstetricians, finding themselves confronted by a breech presentation, resort to *version;* that is, changing the position of the baby. The merits of the arguments for and against disputed obstetrical techniques need not concern us here. Sometimes anomalies in the pelvis complicate birth. Sherbon (80) [1] says:

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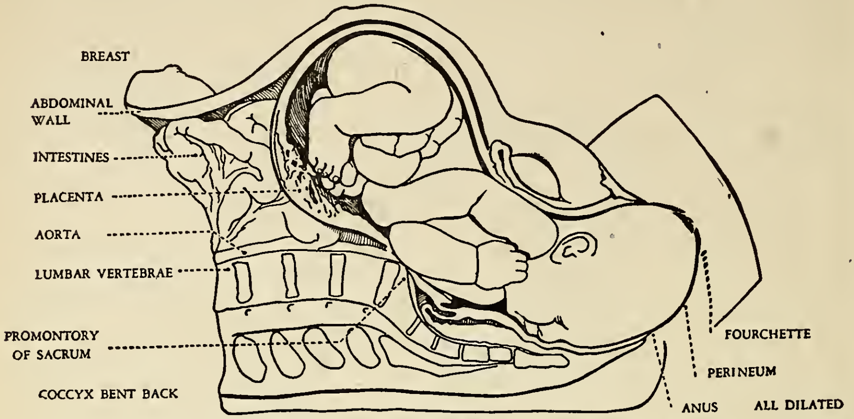
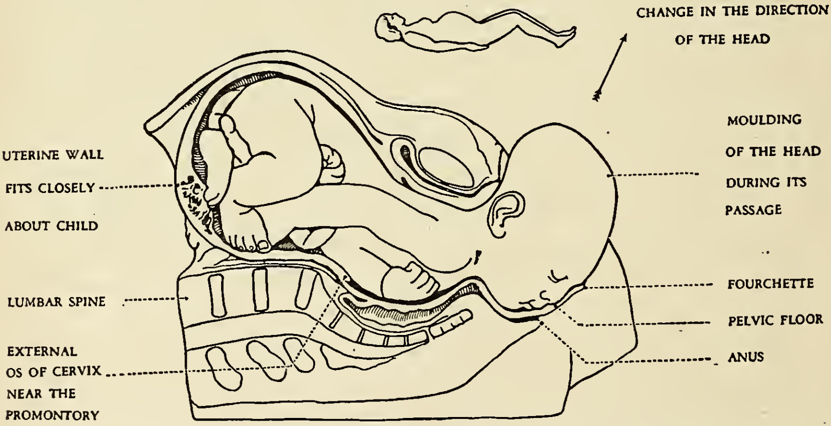
[1] From Florence Brown Sherbon, *The Child,* by permission of McGraw-Hill Book Co., Inc., publishers.

Sometimes the bones of the growing girl child are softened by rickets, or distorted by tuberculosis, bad posture, by injury. The diameters may become narrowed in one direction and elongated in another, making it difficult or impossible for a child's head to pass through the openings. This is one of the complications of childbirth that must be met in extreme cases by surgical delivery (Caesarean section) through the abdominal wall.


BREAST
ABDOMINAL WALL
INTESTINES
PLACENTA
AORTA
LUMBAR VERTEBRAE
PROMONTORY OF SACRUM
COCCYX BENT BACK
FOURCHETTE
PERINEUM
ANUS
ALL DILATED

From Birth Atlas, *by permission of The Maternity Center Association, New York.*

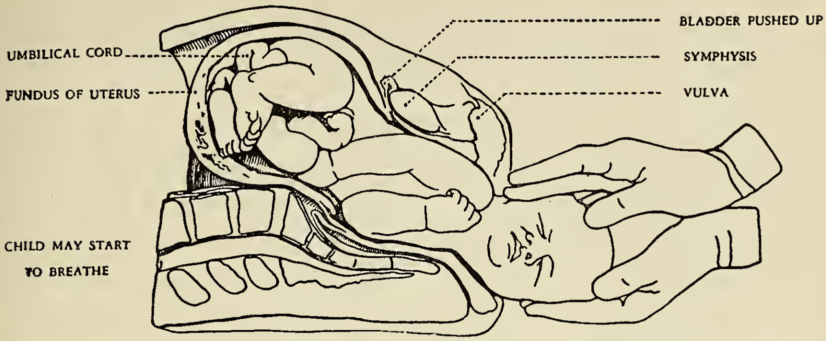
FIGURE 14—LABOR. THE HEAD BEGINS TO APPEAR. MUSCLES OF THE ABDOMINAL WALL CONTRACT. THE PELVIC FLOOR BECOMES EXTREMELY THIN (⅓ LIFE SIZE).


CHANGE IN THE DIRECTION OF THE HEAD
UTERINE WALL FITS CLOSELY ABOUT CHILD
LUMBAR SPINE
EXTERNAL OS OF CERVIX NEAR THE PROMONTORY
MOULDING OF THE HEAD DURING ITS PASSAGE
FOURCHETTE
PELVIC FLOOR
ANUS

From Birth Atlas, *by permission of The Maternity Center Association, New York.*

FIGURE 15—LABOR. THE HEAD TURNS UPWARD. THE PELVIC FLOOR SLIPS BACK OVER THE FACE (⅓ LIFE SIZE).

Surgical delivery through the abdominal wall is spoken of as *Caesarean delivery* or *Caesarean section* because of the tradition that Julius Caesar was delivered this way. Some of the difficulties of birth seem peculiarly prevalent among Negro women, as mentioned previously.



From Birth Atlas, *by permission of The Maternity Center Association, New York.*

FIGURE 16—BIRTH OF THE SHOULDERS, TURNING TO FIT PASSAGE (⅓ LIFE SIZE).

Abortion refers to an early expulsion of the fetus—some authorities restricting the use of the term to the first three months, some to the first six months. Abortion may be accidental or it may be induced for therapeutic or other reasons. In addition, there is criminal abortion. Abortion, obviously, is not necessarily criminal. Although some authors use the term only in this way, such use of the word is unjustifiable. Miscarriage refers to expulsion at a later time, but still before life can be maintained. Many authorities confine the use of the word to the period of four to six months of fetal development. *Stillbirth* refers to the birth of a child who is *dead* at delivery but who has sufficiently matured so that life could have been maintained but for some untoward circumstance or condition. A *premature* birth is one before the normal time for delivery, but in which life can be maintained.

Premature and Postmature Births

Premature children have been the object of great concern. Much unwarranted speculation has been indulged in regarding them. A common fallacy is that a "seven months" baby has a better chance of survival than an "eight months" baby. In ordinary cases, there is nothing to support such an idea. Prematures are, as a rule, smaller than full-term children. In speaking of this fact, Dr. Stuart (86) says[2]: "A small baby usually has less difficulty coming through the birth canal than a large one, but the premature baby has a softer skull, affording less protection to the brain, and his blood vessels are more easily injured." Stuart also says: "Any baby who weighs less than five pounds at birth or who is less than nineteen inches in length is probably premature." These standards may vary somewhat from one author to another, but probably represent rather generally accepted limits.

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[2] From Harold C. Stuart, *Healthy Childhood,* by permission of D. Appleton-Century Company, publishers.

There are several important questions in regard to prematures. One is their chance of survival. Here it must be remembered that the premature child is not *ipso facto* an abnormal child. He may simply need a few weeks in an artificial environment that, as nearly as possible, resembles conditions in the uterus. Current newspaper articles, exhibitions at fairs, and cinema reels have familiarized the public with incubators. Certainly, great care is necessary if the premature child is to survive. This care, however, is a medical and nursing matter and does not properly belong to the field of psychology.

Two other matters regarding prematures are much more directly connected with the field of our present interests. One of these has to do with the way and the degree to which the premature "catches up." This question assumes considerable importance in the field of infant intelligence testing and, for that matter, physical testing. If a child is born at seven months instead of nine, for example, then when he is six months old—that is, six months after his birth—he should certainly not be compared with full-term babies who were born on the same day that he was. Other things being equal, however, no more allowance should be made for him than the amount by which he is premature. Also, other things being equal, it will not be necessary to continue making such allowances indefinitely. No one specified time can be set beyond which we should expect a premature to be developed comparably with a full-term child. It has been shown, however, that premature babies, after about one month of age, begin to grow at a rate so rapid that it is almost comparable to fetal growth. In size, at least, two-month premature babies often have attained normal measurements by the end of the first year. In a study of prematures by Hess, Mohr, and Bartelme (36), it is reported that differences can be shown to exist in their experimental group, in habits and social adaptation, in favor of the full-term group. They did not, however, find evidences of retardation if correction is made for the period of prematurity.

Possible mental deficiency is another question of psychological interest in regard to prematurely born children. We are not speaking at this time of birth injuries; of them, we shall speak later. We refer, rather, to a possible connection between mental deficiency and such prematurity as results in underweight. It is very difficult, however, to separate out these factors, for, as mentioned before, the premature child is somewhat more likely to suffer birth injury because of the softness of his cranial bones. Inman-Kane (46) found that, in institutions for mental defectives, premature birth or underweight at birth, or both, were more prevalent than among unselected children. Likewise, in public-school children, this same investigator found that those children prematurely born or underweight at birth, or both, showed a larger percentage of mental deficiencies than did Terman's 905 unselected children upon whom the Stanford Revision of the Binet test (about which we shall speak in a later chapter) was standardized. Rosanoff and Inman-Kane (77), in another study of 234 pairs of twins, conclude in regard to prematurity and underweight condition at birth[3]:

> The evidence seems conclusive to the effect that premature birth or underweight condition at birth is an etiological factor in mental deficiency. For the most part, if not entirely, the damage is caused by cerebral trauma occurring during birth. Premature and underweight children are much more liable to suffer such damage at birth than are children born at full-term and of normal weight. Prematurity and underweight condition at birth are much more common in multiple than in single births; for that reason, and probably by the same mechanism, mental deficiency is produced more often in twins than in single births.

Less is known about the effects of postmaturity than of prematurity. Many obstetrical and neurological studies, however, recognize postmaturity as a real factor. Fries and Lewi, for example (26), speak of a postmature child examined by them who on the first day of life gave evidence of the "startle" reaction instead of the Moro reflex. Normally, immature nervous systems display the former reaction at birth and only later develop the central nervous system connections necessary for the "startle" reaction. Many references, as mentioned before, can be found in the literature of obstetrics and neurology of the postmature child, but the literature of psychology is surprisingly silent on the subject. The writer has at least seen some postmature children who presented personality disorders upon which she would have appreciated help from the professional literature.

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[3] From A. J. Rosanoff and C. V. Inman-Kane, "Relation of Premature Birth to Mental Deficiency," by permission of *Amer. J. Psychiat.*, publishers.

Birth Injury

We need consider only briefly the matter of birth injury and mental deficiency. (The connection between behavior disorders and head injuries will be considered in a later chapter.) There has been considerable difference of opinion among authorities in this field (3). Tredgold (90), in all the various editions of his work, has given small estimates as to the causal connection. Ford (22) says that cerebral birth injuries are "rather rare than common." On the other hand, some students of the matter have given startlingly high percentages where birth injury was claimed to have been the etiological factor in gross mental defect.

The Training School (for mental defectives) at Vineland, N. J., has been making a study of this matter for several years. As a result, Dr. Doll (17) says:[4] "What seems to have been overlooked . . . is the fact that birth injury may follow from a normal or spontaneous delivery." About 9 per cent of the Vineland population of defectives are classified as birth-lesion cases. Doll (18) also says[4]:

> From six to 10 per cent of all of our mentally deficient subjects at Vineland have motor handicaps due to cerebral birth lesions. The percentage of persons with birth lesions in the mentally normal population is not known, but is probably not more than one-tenth per cent. Assuming that as many as two-tenths per cent of the general population are birth-injured (which is probably a high figure) and assuming that only six per cent of the feeble-minded are birth-injured (which is probably a low figure), then birth injury would be 30 times as frequent among the feeble minded, in general, as among the non-feeble minded in general.

Doll further emphasizes the fact that the real effects of birth injury which develop later in life may be undetected, or at least undiagnosed, if there is no serious motor involvement. Interestingly enough, the Vineland figures show twice as many birth-injured boys as girls, in comparison with the general population according to sex. Doll calls attention to the following: although birth injury accounts for a comparatively small percentage of the total number of feeble-minded, yet feeble-mindedness may be so caused; some birth-injured individuals are not feeble-minded, but develop high degrees of intelligence in spite of their neuromuscular handicaps; if birth injury is recognized immediately, measures can be taken to prevent serious consequences.

Since mental deficiency of moron grade is largely hereditary, Benda

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[4] From E. A. Doll, "Psychological Significance of Cerebral Birth Lesions," by permission of the author and of the *Amer. J. Psychol.*, publishers.

(3) has recently studied by clinical observation and finally by autopsy 100 idiots and imbeciles born to normal parents. Birth injury is strongly emphasized.

Other Factors Connected with Birth

It is strange that so much study has been given to some matters regarding birth and so little to other matters that could conceivably influence the race much more. For a number of years now, studies have been accumulating on the possible connection between month of birth and intelligence. Pintner and Forlano (67) attempt to summarize these results as of 1943. They cite 10 studies and conclude that from all the research examined by them there seems to be a "strong suggestion of a slightly lower mean intelligence among individuals born in the winter-autumn half of the year, the colder-darker months, as compared with a slightly higher mean intelligence for individuals born in the spring-summer half of the year, the warmer-lighter months." They caution, however, that the differences in intelligence are slight and in many cases may not even approach statistical significance.

There is a constantly accumulating library on the effects of birth-order. Sociologists, biologists, to say nothing of medical men, have attempted to show that the first-born child is handicapped (or the reverse); that later-born children are increasingly less intelligent; that behavior disorders are related to birth-order; and so on and so on. A study by Hsiao (45), *Status of the First-Born with Special Reference to Intelligence,* contains a bibliography of 135 books or articles dealing with various aspects of this subject. Hsiao gives elaborate treatment to test results on 2,127 cases. He concludes that "the first-born are at least not inferior to the subsequent children." For those who wish to go into this matter more deeply, Hsiao's review of the literature is recommended, as well as some of the references at the end of this chapter (46, 64, 65, 96). For our purposes, it is sufficient to say that when, and if, a first delivery is more difficult; when the birth of the last child occurs after the birth of a large number of siblings and is accompanied by uterine exhaustion; when economic conditions either improve or become worse as the parents age; when subsequent births change social and emotional factors operating within the family constellation; perhaps then, and only then, can birth order be said to influence child development materially one way or another. There seems to be no ground whatever for any *generalizations* regarding "first-borns," "last-borns," "middles," "onlies," or "seventh sons of seventh sons." The only safe generalization would appear to be that under a given set of circumstances any birth order may constitute a problem factor. This is true not only in regard to intelligence, but also in regard to physical development and social and emotional growth as well. Further attention will be devoted to these considerations in Chapter 7.

Birth Trauma

One other matter in connection with birth must be looked into, and that is the so-called "birth trauma." As used by the psychoanalysts, this trauma is psychic rather than physical or neurological. Rank (72) claims that intra-uterine life is extremely pleasant and that birth, which disrupts this security, is a psychically hazardous experience to which one never entirely adjusts. The individual in later life, he feels, is constantly trying to substitute some thing or some experience for the womb. Rank further contends that fears and anxieties in later life are merely reproducing the birth situation with its shock. Other of the psychoanalysts have been unwilling to go so far as Rank in interpreting the birth experience. Freud, Ferenczi, and Alexander are inclined to question the generality of Rank's hypothesis. For a summary of these points of view, the reader is referred to the digest prepared by Healy, Bronner, and Bowers (35). Looked at in the light of neurology and psychology, there would seem to be little to warrant any assumptions about a child's unwillingness to be born or his desire to return to the uterus. A developing fetus is protoplasm, having the chemical and physical properties of all protoplasm everywhere. It grows and moves and responds to all manner of tropic influences and stimuli. There is not the slightest evidence that it responds in any other way. In such matters, we must always remember that science abides by the *Law of Parsimony*. That is to say, science is never willing to make use of complicated reasonings in explaining a phenomenon if the phenomenon can be explained by the use of simpler reasoning. Science will not justify deductions by the use of hypotheses, assumptions, or guesses if justification can be found in established principles or laws. Now, in regard to the matter of birth, the law of parsimony demands that we conceive of the human being, either at the time of birth or soon thereafter, as capable of the sensations of touch, taste, hearing, sight, smell, and of the organic and kinesthetic sensations. Some of these function before birth, some relatively little or not at all until some time after birth. The important thing, however, is that none of these experiences has *meaning* for the infant until he has *learned* its meaning. Science no longer is willing to believe that the child has "innate ideas." He brings no ideas with him; he acquires ideas through experience. No one will deny that the physiological changes caused by birth, as they affect respiration, circulation, and touch particularly, *may* be extreme. Ferenczi (35) however, states: "The more I observe, the more I realize that none of the developments and changes which life brings finds the individual so well prepared as for birth." Where it can be shown that birth has caused physical, physiological, or neurological changes, we shall not question that motor and intellectual effects may result. It is a different matter, however, to assume interpretative perception or sufficient memory in the new-born to claim that emotional changes in later life are caused by birth trauma. Even to pain, the infant is, for the most part, only *diffusely* sensitive. William James (49) was probably more nearly right when he said that "the baby assailed by eyes, ears, nose, skin, and entrails at once, feels it all as one great, blooming, buzzing confusion."

Prevalent Fallacious Ideas

Much could be written on the superstitions that cling around pregnancy and birth. Most of these need not concern us here, but a few may well be mentioned. Nurses are all familiar with the belief current in many quarters that a child who is born with some of the afterbirth around its head—"born with a veil"—has certain mystic powers. Another common superstition is to the effect that a child born "feet first" will probably cause trouble by his wanderings for "you can never tell where his feet will carry him." Of course, when a runaway is discovered to have been a breech presentation, the case is absolutely proved to some minds. A rather more serious belief is that so long as a woman is nursing one child she will not become pregnant with another. The mother of two illegitimate children once bemoaned her luck to the writer and was utterly at a loss to know how the second pregnancy could have come about when she was still nursing the first illegitimate. Other unfounded beliefs have to do with determining the sex of the child: if, during coitus, the mother lies on one side, the offspring will be a boy; if she lies on the other side, it will be a girl. Many other such superstitions will no doubt come to the mind of the reader.

One of the most persistent superstitions concerns prenatal influences and "marking" the child. Miller (57) says that the Kaffir mother will not eat the underlip of a pig for fear her baby will have a large underlip, and that among the Ila-speaking people, a pregnant woman will not eat goose lest her baby have a long neck. In *Little Pierre,* Anatole France tells of the old doctor who was skeptical about all such prenatal influences and remarked that it was well the child's mother had not wished for feathers, a coach and four, a town house, and a park, for there would not have been skin enough upon the whole of the body of the child to have been marked by the maternal desires.

Wiener (95) quotes an interesting example of the supposed influence of prenatal impressions and one which had important legal bearings[5]:

> Thomsen has recently reported a case, tried in Denmark, in which the illegitimate child of a servant girl possessed an unusual deformity of the fingers that corresponded exactly to that of the mother's employer. The claim for maintenance for the child was refused by the court, however, since it was held that the continual observance by the mother of her master's deformity fully accounted for the appearance of the anomaly in her child. This illustrates how difficult it is to destroy popular belief in certain superstitions, even in the absence of any rational basis.

Many a mother who chances to see a wild animal during her pregnancy fears that the sight may "mark" her baby in some way. The foods for which a pregnant woman may have a peculiar craving are believed by many to be mirrored upon the child's body or to influence the child's food preferences. Many a mother who has seen blood shed and then has touched her own body suffers mentally for months lest she has imprinted a mark of blood upon her baby's body at some place.

The writer recently examined a 4-year-old-child who had not yet developed speech. Intelligence testing showed ample reason for this fact since the child had not yet developed intelligence enough for speech. The mother, however, was very self-accusatory about the whole thing. She feared she herself was being punished and the child "marked" because during her pregnancy she had been nervous, had been annoyed by the talking of the children, and had constantly "shushed" them into "not talking."

We must remember from our previous discussion that there is no nerve connection whatsoever and no common circulation between the mother and her unborn child. The only connection is via the chemical elements that pass by osmosis through the walls of the mother's blood vessels into the blood vessels of the fetus. It is, therefore, absolutely impossible for visual impressions of the mother so to affect her blood stream that it, in turn, will circulate through the body of the baby and stop at exactly the right spot and leave a duplicate impression.

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[5] From A. S. Wiener, "Determining Parentage," by permission of *Scientific Monthly,* publishers.

Furthermore, for still another reason, many of the coincidences of congenital deformities cannot be explained by maternal impressions. We have seen in our previous discussion how certain arrests of development occur at definite times. Now, the accident either does occur at that time or it does not. Let us take a case known to the writer where the mother, a month or so before the birth of her baby, saw a peculiarly formed potato that resembled a hand with stubby fingers. When her baby was born, it did have a deformed hand which, by a stretch of the imagination, might be said to look like the potato. The case is nothing but a coincidence. As a matter of fact, the retardation of development of the baby's hand in utero had happened, as embryologists could prove, long before the mother's experience with the potato.

Another case known to the writer is an example of a similar kind. The mother was the offspring of a brother and sister who were inmates of a state institution; she was born there. In her early twenties, she became a domestic in the employ of a farmer. Soon she was married to the dullest son of the farmer. When she was about six or seven months pregnant, the father of her child was kicked in the head by a horse. His face was split down through the middle; his skull was fractured; and his head was so injured in other ways that he died. Of course, all this was a great shock to the pregnant woman. No doubt her endocrine system was considerably disturbed, and no doubt for a time her blood stream did carry an unusual chemical composition. When the child was born, it was found to have a harelip and cleft palate. In such a case it would be unwise, perhaps, to *try* to explain to the mother that this deformity, which might conceivably look like the cut face of her husband, had already been established long before the fatal accident. It would be unkind as well as useless to explain to her that probably her defective germ plasm had not had the vigor necessary to carry through to completion the development of a complicated human being.

The fact that we cannot explain all congenital deformities or marks does not, of course, make it incumbent upon us to accept an explanation that a midwife thinks she has to offer. The thing to keep in mind is that if prenatal impressions had the power to mark offspring, probably no one of us would have come into the world normal. It is inconceivable that a woman can live for nine months without having some untoward experiences, and yet *few* people have congenital markings of any kind. It is to be hoped that we may all have some part in freeing women from such needless fears as many of them experience during pregnancy. It is well, of course, for them to live a continuously hygienic life, both physically and emotionally, so that all the vital processes function as perfectly as may be. Although shocks of any kind are to be avoided whenever possible, they need not be feared so far as "marking" the baby is concerned.

A discussion of prenatal care and prenatal impressions, in these days, is likely to raise the question as to the possible effect upon the child of smoking by the mother. Of course, there is no reason for thinking that her germ plasm will be affected by smoking. Whether smoking will affect the mother's blood and thereby affect her child is another matter. There is no definitive research on this matter as yet, and certainly nothing to prove that the unborn child is affected by the mother's smoking. Some physicians feel that whatever the mother's system has been adjusted to harmlessly before pregnancy will not affect her or her child during pregnancy. Others would have all smoking discontinued, but one might question whether this judgment rests upon scientific evidence or merely upon a prejudice against smoking. It is possible that smoking may affect the *milk* of the nursing mother. Here again, however, if the system of both mother and child have been adjusted to tobacco, it is doubtful whether penetration into the milk will have much effect one way or another upon the infant. As matters stand now, it would appear that the mother's comfort and peace of mind in regard to smoking are of more significance than the possible effect of tobacco.

Chronic emotional disturbance in the mother raises certain justifiable questions about possible effects upon the child in utero at the time. The writer recalls a clinic patient who illustrates this matter. When first seen, the child was 5½ years old. His behavior was so peculiar that he was a problem to his family and to his kindergarten teacher. His developmental history had been normal enough, a fact that leads one to discount feeble-mindedness as the cause of his difficulty. Incidentally, his Binet-Simon intelligence quotient was 60. Ordinarily, a clinical psychologist would interpret such an I.Q. as indicative of serious mental retardation. In this case, however, internal evidence in the test responses themselves, as well as inconsistencies in the child's behavior, were more suggestive of severe emotional difficulty than of mental defectiveness. On all the occasions that this child was seen in the clinic he gave the appearance of being able, at will, to shut off deliberately anything that was said to him, or anything that he did not wish to see. At times also he would laugh peculiarly when apparently there was nothing for him to laugh at. Again, he would talk under his breath. Much of this behavior brought "pre-schizophrenia" to mind.

On the other hand, he also engaged in behavior that was just as suggestive of "pre-manic-depressive" disturbance. The mother described the child's behavior as being in "cycles." This cycle behavior characterized his affectional relations to members of the family; his "good" and "bad" behavior; his screaming out at night, which would be noticeable for a time, subside, and then recur violently; the fears followed by indifference toward objects in the environment, for example, *"new* street cars"; manias about not having chairs in front of the doors; and many, many others. The first time the child was in the writer's office he looked out the window and saw a smokestack. He became very emotional about the "moke tack." In an effort to secure the child's coöperation with the clinician, the mother promised to take him to see the smokestack "when we have finished here." Immediately the child changed his tune and intermittently throughout the interview period pleaded piteously not to be taken to see the smokestack.

Much more evidence of the child's disturbed condition could be cited, as well as much evidence indicative of an intelligence much superior to superficial indications. All other children in the family had developed normally. The prenatal history of this child seems to be peculiarly significant. In the early days of the mother's pregnancy, an older sibling had been operated upon for gall-bladder difficulties. There were very serious complications, and day after day the family did not know whether or not the child would live. During this time it was necessary for the pregnant woman to stay by the side of the ill child. For seven weeks she lived in the hospital and was in constant anxiety. About two weeks after her return home with the convalescing child, the paternal grandmother, who lived with the family and to whom they were all greatly attached, died suddenly of a heart attack and fell down a flight of stairs. Again the family was thrown into shock and grief. The emotional upset lasted, in all, over a period of several months. From what we shall discuss in a later chapter on emotions, there is every reason to believe that for this period of time the chemical composition of that mother's blood was far from normal. How much this disturbed blood supply affected the child developing in utero perhaps no one will ever be able to say, but it seems reasonable to suppose that some effects would be inevitable. Every psychological clinic can perhaps cite cases of *prolonged* prenatal emotionality that *seem,* at least, to give rise to unstable children. Current literature in this field is now considering the possibility that pregnancy during war, in those cases at least where there is prolonged grief or anxiety, may produce children with severe involvements of emotionality or instability.

Hospitalization or Home Delivery

The expected birth of a baby is likely to raise the question as to hospitalization or home delivery. On the one hand, there is the fear of hospitals, the unwillingness to leave home, and the dread of expense, all of which operate in the minds of some women. On the other hand, there are the greater provisions for emergencies and for continuous professional care, and the relief occasioned by being entirely away from home responsibilities, all of which are provided by hospital delivery. The difference in expense is, in many cases, more apparent than real. Delivery at home is bound to entail unexpected expense for needed supplies, extra help, and the like. Sherbon (80) gives comparative figures of home and hospital delivery. Needless to say, these figures will vary according to place, economic trends and particular circumstance. Dr. Sherbon reports that the expense is likely to run from $170 to $350 in *either* hospital or home. Of course, if a private nurse is employed in the hospital, the figures will run higher; if the mother is a client on relief and is delivered in her own home, they will be decidedly lower.

According to the White House Conference (94), there are no reliable figures by which we can determine relative death rates for home and hospital deliveries. About 50 per cent of the mothers who were interviewed for the White House Conference Report were confined in hospitals, but the percentage was much higher in the higher socio-economic groups than in the lower ones. It is reasonable to suppose that home deliveries among those families just above the relief line increase in times of economic depression. Fortunately, greater attention is being paid in most states now to licensing, training, and supervising the 47,000 midwives in the United States. Slightly over 3 per cent of white live births and somewhat over 50 per cent of Negro live births are attended by midwives, according to Metropolitan Life Insurance Company statistics.

Identification of Babies

In connection with the question of hospital delivery, it is unfortunate, indeed, that newspaper publicity within recent years has done much to increase fear, on the part of the laity, that hospitals are likely to "get the babies mixed." There is very little danger that this will happen, and no reason whatever why it should happen. Most hospitals now have babies foot-printed immediately after birth. Furthermore, each baby has his name or identifying number fastened to his body in some fashion—either printed on a strip of adhesive tape or by little lettered beads around his neck. Wiener (95)[6] cites the famous Chicago case of 1930, where "one week after taking their baby home, Mr. and Mrs. B. discovered that the baby had a label on its back with the name 'W.' At the W. home the baby was found to bear the label 'B.'" The four parents and the two babies were then given blood tests. It was discovered by these tests that one baby could belong to Mr. and Mrs. W. and could *not* be the offspring of Mr. and Mrs. B. It was also found that the other baby could not possibly be the child of Mr. and Mrs. W., but could belong to Mr. and Mrs. B. "It was evident that the babies were properly labeled but had been taken to the wrong house."

Determining Parentage

The identification of babies suggests another important question, namely, that of determining parentage. Many very unfortunate cases have been known where a question of either paternity or maternity was involved. A case reported once in the papers puts a modern touch to the Biblical story of the wisdom of Solomon in deciding maternity. In this case, the judge decided that the woman who preferred to have the child in dispute given to the other woman rather than have it sent to an institution was probably the real mother. In all too many instances, paternity or maternity have been decided, either in or out of the courts, on the basis of supposed physical resemblance. Wiener (95)[7] cites such a case in the Court of Quarter Sessions of Fayette County, Pennsylvania, in 1931:

> In this case an Italian man was said to be the father of the illegitimate child of a white woman, but, according to blood tests performed by Dr.

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[6] From A. S. Wiener, "Determining Parentage," by permission of *Scientific Monthly*, publishers.

[7] From A. S. Wiener, "Determining Parentage," by permission of *Scientific Monthly*, publishers.

Heize, it was impossible for the accused man to be the father. Nevertheless, since the jury was convinced by the district attorney that the child in question showed some resemblance to the accused man's *father,* they returned a verdict of "Guilty." . . . Fortunately, the judge did not allow himself to be deceived, and, finding the verdict to be against the evidence, he declared a mistrial. The woman never applied for a new trial, since shortly afterwards the infant's features began to change, and now, three years after the trial, the child has features definitely Negro in character.

Certain states, according to Dr. Wiener, do not permit the exhibition of the child to the jury for purposes of proving paternity.

Blood Groups

Now, what are the possibilities of determining parentage by blood tests? Investigations have shown that an individual's *blood group* can be determined at birth or shortly after, and that it never changes thereafter. Furthermore, the blood group to which an individual belongs is heritable, according to Mendelian principles.

The blood group depends for its identification upon the presence or absence of certain properties in the blood cells. For example, when the red blood cells of one person are introduced into the blood serum of another the red cells may agglutinate, or clump together, or they may not. This is due to the fact that the red cells contain *antigens* or *agglutinogens.* Similarly, there are present in many of the fluids of the body, particularly for our purposes in the serum or plasma of the blood, certain *antibodies* or *agglutinins.* For the present, we shall confine our discussion to the two antigens, A and B, which were recognized first. Research has shown that an individual may have in his red blood cells antigen A, or antigen B, or neither, or both. Since there is a reciprocal relation between each of the antigens and its particular antibody, it follows that a person has either antigen A or the antibody against it. Likewise, he has either the antigen B in his blood or the antibody against B. Persons who have neither antigen A nor B are said to belong to group O. Thus, mankind may be said to be divided into groups—A, B, AB, or O.

This differentiation is known to result from *multiple allelomorphs* in a particular chromosome. In an earlier chapter, we spoke of *pairs of allelomorphs* which separate at the reduction division or maturation, one allelomorph going into one gamete and the other into the other. In addition to such pairs of allelomorphs, there are also *sets* of allelomorphs which contain more than two members. These are known as multiple allelomorphs. It should be remembered, however, that no matter how many sets of allelomorphs there may be, only two of them normally occur together and therefore only one is to be found in each gamete. In the case of blood, hereditary transmission is by way of a set of three alleles or allelomorphs, namely gene A, responsible for the presence of antigen A; gene B, responsible for antigen B; and gene O, which does not produce either antigen.

It will be recalled from our previous discussion that the fertilized ovum from which a new individual takes his origin contains one allelomorph in regard to the particular trait in question from each parent. It will further be recalled that the new individual is *homozygous* if the two inherited allelomorphic genes are similar, and that he is *heterozygous* if he inherits the allelomorph for one trait from one parent and the allelomorph for the opposing trait from the other parent. Since genes A and B are dominant over gene O, but not to each other, certain formulae result as regards inheritance of blood groups. This is illustrated in Table V, below.

TABLE V

GENETIC CONSTITUTION OF BLOOD GROUPS

Fertilized ovum containing allelomorph from each of two gametes.	Can give rise to the following blood types in offspring.
OO	Group O
AA or AO	A
BB or BO	B
AB	AB

Since O is recessive to both A and B, an O individual has to be homozygous. An A individual may genetically be either AA or AO; and a B individual may be either BB or BO. The following tables from Snyder (slightly reworded) illustrate these principles. One shows the possibilities when the blood groups of both parents are known, and the other when the blood group of the child and of only one parent is known.

Recent research has demonstrated other blood groupings, including some subgroups of antigen A which need not concern us here. The Rh blood factor is also attracting a great deal of attention (70, 81, 84). This human antigen was discovered through research on the rhesus monkey, and it is therefore named for his initial letters. This blood factor has been demonstrated to be heritable through a pair of *autosomal* (i.e., *not sex* chromosomes) genes. The dominant gene is designated *Rh,* and the recessive one *rh.* An individual who inherits the recessive rh factor from both of his parents is a pure or homozygous

Table VI

THE INHERITANCE OF THE BLOOD GROUPS, BASED ON THE STUDY OF THOUSANDS OF FAMILIES

Blood Groups of Parents	Blood Groups Which May Occur in Children	Blood Groups Which Cannot Occur in Children
O × O	O	A, B, or AB
O × A	O or A	B or AB
A × A	O or A	B or AB
O × B	O or B	A or AB
B × B	O or B	A or AB
A × B	O, A, B, or AB	——
O × AB	A or B	O or AB
A × AB	A, B, or AB	O
B × AB	A, B, or AB	O
AB × AB	A, B, or AB	O

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Table VII

MEDICO-LEGAL APPLICATIONS OF THE BLOOD GROUPS

Blood Group of Child	Blood Group of One Parent	Blood Group to Which Other Parent Could Not Belong
O	O	AB
O	A	AB
O	B	AB
A	O	O or B
A	B	O or B
B	O	O or A
B	A	O or A
AB	A	O or A
AB	B	O or B
AB	AB	O

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individual and is designated Rh negative. By the same token, a person is Rh positive: (1) if he inherits Rh from each of his parents, (2) or if he is herterozygous, inheriting Rh from one parent and rh from the other. Although it is now known that even the Rh factor has subdivisions, the mode of transmission is nevertheless Mendelian. To date, the practical known significance of the Rh factor lies in the following facts. (The role of Rh is also being studied in connection with feeble-mindedness.) For years a disease known as erythroblastosis has baffled the medical profession. It is a condition of infancy in which there is in the fetus or in the new-born child a swelling of the tissues, jaundice, and anemia. It now appears that this condition, through processes of circulation through the placenta, occurs only when the mother is Rh negative and the child in utero is Rh positive.

It might not be out of place at this point to mention a common human tendency to attempt to explain away all human shortcomings through the instrumentation of some item of current scientific interest. Time was when, in the minds of many, removal of tonsils wholesale would save the country, figuratively speaking. Administration of intelligence tests and subsequent improvement of educational practice followed as another panacea. Recently a physician and his wife came to the writer with their 4-year-old son who was talking almost not at all. The physician father raised the question as to whether the Rh discrepancy known to exist between his wife and the child might be responsible. There certainly is no specific research on this aspect of the Rh factor to date, but there are certain other guiding principles that would probably justify one's giving a negative answer in this case. To begin with, speech is an enormously complex function, and it is not at all likely that a specific gene could influence all aspects of speech. Of course it is known that when speech is broken down into tongue function, vocal cords, and many, many other items heredity is definitely known to play a role. Interestingly enough, in this case the father has a definite speech defect and relates that many members of his family have had peculiarities of speech or slowness in developing speech. Undoubtedly, there are hereditary factors involved in the case of this child, but they are probably multiple rather than depending upon the Rh factor alone.

We must also mention two other and independent antigens, M and N. They appear to have no normal antibodies. Their inheritance is Mendelian through a single pair of allelomorphs not showing dominance. The following table shows the use of these facts in determining some of the possibilities of parentage:

Table VIII

THE MEDICO-LEGAL APPLICATIONS OF THE BLOOD TYPES

Blood Type of Child	Blood Type of One Parent	Blood Type to Which Other Parent Could Not Belong
M	M	N
M	MN	N
N	N	M
N	MN	M
MN	M	M
MN	N	N

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From the foregoing, it can be seen that certain facts may be ascertained about possible maternity or paternity. Questions of paternity are of course more frequently encountered than those of maternity. Tests of blood groups and blood types are not accepted in all courts of law. Obviously, no test will ever prove—at least so far as is now known—that a given man or woman *is* the parent of a given child. Tests for either the AB reaction or the MN reaction will tell us, however, that a given man *could be* the father of a given child or that he *could not be* the father. In other words, serological tests can exclude the possibility of parenthood, but they can *prove* only that a given individual *may be* the parent.

Blood Transfusion

It would seem like a tantalizing thing to omit all mention of blood transfusion in our discussion of heritable blood group and types. Modern warfare and modern surgery on the battle front, the delivery room, and the operating room have saved so many lives with transfusion that our "professional layman" should know at least some of its first principles. Formerly, transfusion depended upon the finding of a donor with suitable blood at the time of the emergency. More recently, blood banks of one kind and another have been offering a less haphazard method of insuring immediate action. In some cases, whole blood is saved and stored; in other cases, only the blood plasma is stored. In any case, agglutination of red cells from a donor by the serum of the recipient of a transfusion must be prevented to avoid harmful results or even death. For this reason, there must be injected into the recipient's body only such a blood group as matches his own. If a donor with matching group cannot be found, it is safe to use the blood of a "universal donor" or a donor from group O. Red cells from group O blood are not agglutinated by the serum of any group, and the serum from a group O donor is so diluted in the recipient's circulation that there is small chance that it would cause any harm.

Birth Rates

Social workers are of necessity interested in the question of the birth rate among clients, particularly among those in the lower economic brackets. Newspapers have publicized the instances of *multiple births* in families on relief until one must be careful lest he be led into the belief that triplets, quadruplets, and quintuplets are born only in relief families. Such questions raise age-old speculations about the possibility of increased birth rates during war, famine, or other periods of emotional stress. Presumably, any factor that would materially increase frequency of coitus would stand a chance of increasing birth rate. However, these questions scarcely belong in our field, except that, from the standpoint of child psychology and child welfare, we are interested in knowing whether children are being born into homes where they will not receive adequate care and where they may not be wanted. We shall mention here only a few studies that have attempted to ascertain whether the birth rate in relief families is actually higher than normal. Popenoe and Williams (69) studied, in Los Angeles County, 54 families that had been dependent on public relief for years. They conclude that: "the longer a family is dependent upon charity the more children it produces." Himes (37) reviews 5 studies of depression and pre-depression birth rates of both relief and non-relief families. His conclusion is that relief families have a higher birth rate when on relief than when not, and that the birth rate is higher in families on relief than in those not on relief. One can but wonder about the effect on personality (88) in children who, from birth on, have never known anything but dependence on charity!

Kiser (52) gives findings from the National Health Survey by the United States Public Health Service in 1935-1936. Over 700,000 households in 83 cities in 18 states were studied. These families provided data on 375,000 married women of childbearing age. Kiser says that the "traditional inverse relation" between socio-economic status on the one hand and fertility on the other hand was found.

In 1943 the Milbank Memorial Fund Quarterly (93) reported a survey, sponsored by the Council of Social Agencies of Indianapolis, of the relations between fertility, education, religion, and economic status. Practically every white household in which the wife was under forty-five years of age was included in the study. "The usual inverse relation of fertility to social, economic, and educational status was found among both Protestant and Catholic couples."

The relationships just mentioned are complex and highly involved. Causative factors cannot be discussed here. Other interesting end results are noteworthy, however. For example, in 1933 the birth rate in this country reached an all-time low. After the beginning of World War II the rate went up again "with unparalleled rapidity," according to the Metropolitan Statistical Bulletin for August, 1944. According to this same source, a decline in the birth rate set in again during the last quarter of 1943, although the total figure for 1943 exceeded 3,000,000, the highest in the history of the United States. It is obvious that there are probably many factors operating to produce these conditions. One is led to believe, also, that triple and quadruple births have been unusually frequent since the beginning of World War II. At any rate, there has been much newspaper publicity about them (63, 83, 93).

Naming the Child

The name that is given to a child at birth or shortly thereafter may constitute a psychological hazard. Certain so-called primitive people are said to give to the child the name of the first thing that the eyes of the mother light upon after her delivery. It would almost seem that some procedure not far different from this pertains among some supposedly civilized peoples! There is a very interesting psychology involved in those cases where a parent projects his own life into his child by giving the child his own name. Of course, that is not always the reason for so doing. In many cases, the mother's name is given to the daughter, for example, at the urgent request of the father. In some cases, the name may be given to perpetuate a family name long known in the community. In *some* cases, however, it may be a projection of the parental ambition, domination, and desire to control the destiny of another individual. Other cases where a name may cause psychological tragedy occur when a child is given a name that will cause confusion in the minds of others as to the sex of the child. This is particularly common in certain parts of the country where girls are given boys' names. Perhaps the parents do not realize or anticipate the embarrassment of their daughter when, years later, her application for space in a girls' dormitory at college is refused and returned with the curt comment, "You evidently do not understand that this is a *woman's* college." Naming a child for a currently popular hero may also cause a great deal of embarrassment later when the idol has been discovered to have feet of clay. Any name that marks off a child as different, or as having parents who are different, may be an emotional millstone around the neck of the child. On the subject of nicknames, we shall have more to say later.

Birth Registration

Still another point in connection with the birth of the baby is of a significance that is perhaps not generally recognized. The registration of all births is required by law in this country and in many foreign countries. This has not always been true, however, and even since the recording of vital statistics has been a matter of legal requirement, all too many omissions have occurred. It would be safe to say that many adults who read this page would be unable, without considerable difficulty, to procure legal evidence of their birth. Laws relative to entering and leaving school, passports, inheritance of property, voting, right to hold office, and many other important matters that arise during the course of an individual's life make birth registration an invaluable asset. Social workers and nurses are in a position to follow through any incipient negligence upon the part of physicians or parents in this matter. Every child is entitled to this—"his first citizenship paper." Birth registration of adopted children will be considered in a later chapter.

The Unmarried Mother

The question of pregnancy and birth cannot be dismissed without a word relative to the unmarried mother. (See also Chapter VII.) It is hard to realize the anguish that many an unmarried mother goes through during the first weeks of her suspicion and final awful conviction that she is pregnant. Then follow other weeks either of concealment of the fact from her family or of the unpleasantness of informing them. Regardless of the previous life of the unmarried mother, it is fairly safe to say that if she has any degree of intelligence at all, an illegitimate pregnancy carries a great deal of hardship for her. The social worker oftentimes in such cases has a double role to play—one of constructive work with the unmarried mother herself, and one of building up acceptance of reality by her parents. Some parents do not realize that if ever their daughter needed their care and help it is in such situations. Pregnancy is probably not the time for chastisement or much attempt at reform. That is not only locking the stable after the horse is stolen, but is also whipping the horse and rider. For the sake of both the unmarried mother herself and her child, conditions should be made as hygienic as possible, both physically and mentally. Perhaps a constructive rehabilitation program can be worked out also, but it certainly will not be accomplished through ostracism.

Sterility

The case of the husband and wife who wish to have children but seem unable to do so is often encountered by the nurse or physician. Until fairly recent times, there has been very little known about the causes of sterility, other than the effect of venereal disease already mentioned on previous pages. That the condition was not always permanent and was not always caused by disease was attested by the fact that not at all infrequently childless couples who adopt a child shortly thereafter find that they are about to have a child of their own. It has long been recognized, also, that the menstrual function is easily disturbed in the case of the woman who fears that she may be pregnant outside of marriage and in the married woman who greatly desires to have a child. In other words, there has long been evidence that sterility or fertility may be influenced by emotional and psychological factors. This, of course, is no doubt in some cases at least the reason why a man and woman may be sterile to each other but not to another mate. The matter of having children when they are fervently desired is of such importance that many city hospitals now conduct sterility clinics. In such clinics, study is made of endocrine, dietary, psychological, and many other factors. Through these services many wanted children have been brought into families hitherto childless. In some cities various social agencies and maternal health clinics can refer couples to such clinics. The following references may be of value here: 2, 33, 74. In this connection, also, it is interesting to speculate upon the possible effect upon birth rate of certain religious beliefs. Some creeds discredit voluntary control of the number of offspring by any artificial means, and some sects put great stress upon the number of offspring in relation to the comfort of the parents in the life hereafter.

Other Factors of Significance

So far, we have considered only the heredity and the birth of the child. The number of points of vital significance to the future welfare of the child in these two fields is startling. Matters of family relationships, of education, of moral training, and other highly significant points have not even been approached as yet. One has the feeling that it is well for us to take time out occasionally to review, in our thinking, some of these matters relative to heredity and birth. There are so many factors entering into the shaping of the life of a child for which he is in no way responsible! Popenoe and Johnson (68) say: "In Los Angeles County alone . . . more than a thousand couples each year go to the courthouse and apply for a license to wed, and then do not come back three days later to get it." One wonders what happened to these proposed marriages, what kind of marriages they would have made, how much thought would have been given to children. One also wishes that an educational program could be speeded up by which those who marry and have children would give serious thought to the matter, would seek advice and counsel when needed, and would have children only if and when they could be given adequate care. Social workers, nurses, visiting teachers, and clinicians pray that there be not too much delay in bringing about the third and fourth points of the *Children's Charter* (94):[8]

III. For every child a home and that love and security which a home provides; and for that child who must receive foster care, the nearest substitute for his own home.

IV. For every child full preparation for his birth, his mother receiving prenatal, natal, and postnatal care; and the establishment of such protective measures as will make child-bearing safer.

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Chapter IV

INFANCY

Terminology

In the preceding chapters, we have assayed to develop an appreciation of the niceties of heredity and of the birth process. Now we shall examine the child that has thus been brought into the world. The child at birth is often spoken of as the *neonate*. This term, like many others in the literature of childhood, differs in usage from one author to another. We shall here cut the Gordian knot, define our own time limits, and proceed. There seems to be ample precedent both in medical and in psychological literature for using the word *infant* in speaking of the first 2 years of life. We shall in the succeeding chapter refer to the *preschool* child as the child from 2 to 6 years of age. It should be understood that this arbitrary division is merely for purposes of organization. In reality it might be better, where possible to do so, to drop entirely the idea of periods in an individual's life. After all, life is a continuum and at no certain time does a child stop being an infant and become a preschool child. Nothing mysterious happens to the child when he is 5, although some of the literature of the past might lead one to think that the first 5 (or 6 or 7 or what not) were the only years worth counting. Similarly, many of the distinctions in educational practice between the junior and senior high school are just as tenuous. One might go further and say that even old age is not, in reality, an imposition of great changes, but is rather just a strengthening or a weakening of physical, emotional, and intellectual patterns that have been accumulating throughout life. So long, then, as we understand that there are no sharp *psychological* lines of cleavage between one period of life and another, we may adopt *literary* distinctions with safety. We shall, therefore, limit our present discussion to some matters that belong primarily to the first two years of life. In the following chapter, we shall consider those that are ordinarily thought of as belonging to the preschool period. There can be no quarrel, however, with anyone who wishes to say that much of the material contained in this chapter might just as well have changed place with much that is to be found in the succeeding chapter.

Infancy and the Sciences

Still another point must be called to mind before going further, and that is the overlapping of the fields of pediatrics, sociology, and child psychology. At many points regarding the child, the sociological and the psychological lose their identity. Professional workers in these two fields have accustomed their thinking to this fact. Similarly, the psychological becomes the medical and the medical the psychological with little change of aspect. In the field of infancy, this is particularly true. Much of what we shall have to say about infancy will show the inextricable blending of these two disciplines. Even the motor and the intellectual are but two sides of the same shield, as we shall see in our consideration of the developmental norms of infancy.

Perhaps psychology owes infancy an apology at this point, since such a large amount of the psychological study of recent years has had a more or less cloistered value. Stabilimeters have taught us much about the movements that an infant makes in his sleep, but we still do not know why at times babies do not go to sleep in spite of apparently normal sleeping conditions. Researches have been made upon the role in later life of the development of the index finger of the infant, the appearance and disappearance of certain reflexes, the time of the appearance of tears, the age when the first social smile is noticed, and many other matters which have *more or less* practical value. Nevertheless, the space of this entire book would not permit a discussion of the matters of importance concerning infancy and early childhood about which psychology is still woefully ignorant.

The Newborn Infant

Let us take a look at a newborn infant. He is not an homunculus —a man reduced to smaller size. The fact is that, if the parts of his body were to grow at equal rates of speed from birth to maturity, he would become a monstrosity. Because of a very wise provision of nature, the infant's head at birth is of terrific size in proportion to the rest of his body. The head, therefore, will not need to grow so much after birth as some other parts of the body, because it has such a good running start. The reason for this is apparent enough when we consider the vital necessity of the functions presided over by the brain. Rand, Sweeny, and Vincent (94) say: "One quarter of the weight of the adult brain is attained by birth, one half in the first nine months and about three quarters by the end of the second year and 90 per cent by six years." Another striking characteristic of the head of the newborn child is the relatively small amount which is face. Many painters of the Madonna and Child have not recognized these infant peculiarities. The head at birth, furthermore, is marked by the presence of several so-called "soft spots," the fontanelles, where the bones of the skull are still imperfectly sutured together. Two are of particular importance. The *posterior* fontanelle normally closes at from one and one-half to two months of age; the *anterior* one usually at eighteen to twenty-four months. Defective brain development may cause premature closing, and rickets may retard the closing of the fontanelles.

The following table of infant-adult ratios is a kind of rough scale by which to remember some of the descriptive features of infancy.

Head of the infant : to head of adult :: 1:2
Trunk of the infant : to trunk of adult :: 1:3
Arms of infant : arms of adult :: 1:4
Legs of infant : legs of adult :: 1:5

However, in spite of his curious proportions, his wrinkled and often very red and maybe even hairy skin, his drawn-up arms and legs, the baby at birth is normally able to breathe for himself, cry for himself, make the beginnings of the sucking reaction, and perform all vital activities. He may yawn, sneeze, or hiccough very soon after birth.

Sensory and Motor Development

The matters with which we are most concerned here are those which have to do with the infant's mental life (10, 50, 64, 65, 91, 92, 115). They can be approached only through his sensory and motor reactions. Let us examine these in turn. The baby is not born blind or with his eyes closed. At birth he can see a few feet in front of him, but what he sees *means* nothing to him. Gradually he acquires sufficient control over his eyes to follow objects moving horizontally and, somewhat later, objects moving vertically.

Although individual differences no doubt exist among infants at birth in regard to hearing, the majority give little or no evidence of auditory sensitivity until sometime later. The middle ear is filled with mucus or with amniotic fluid and until these substances leave the ear, hearing is impossible. Aldrich (2) devised a clever way of determining whether a young infant is deaf or whether he merely does not respond to sound stimulation in a way we can interpret. His method consisted of scratching the infant's foot at the same time that a bell was sounded near by. After sufficient repetitions of these simultaneous stimulations, the baby, if it were not deaf, became "conditioned" to the sound of the bell; that is, the withdrawal of the foot would occur when the bell was sounded even though the foot had not been scratched. This, of course, does not occur unless the infant is sensitive to the sound of the bell.

As to the infant's ability to respond to taste, authorities differ. Certain it is that *some* infants have shown definite responses to taste stimulation soon after birth. In fact, some investigators have even been able to elicit differentiated responses to salt, sweet, bitter, and sour in prematurely born children.

The sense of touch probably functions more perfectly at birth than any other one of the sense modalities. Even premature infants are sensitive to pain stimuli. It has been suggested that marked insensitivity to pain might be used as a criterion of defectiveness. Touch sensitivity is peculiarly acute in the lips, tongue, and mouth. Extremes of heat and cold are potent stimuli; this is one reason for the caution always urged in regard to the temperature of the infant's bath water.

Olfactory sensitivity is very difficult to test in infants. When they appear to be responding to smell, one cannot be sure but that they are reacting, rather, to taste, pain, or tactile stimulation.

Reflexes

In addition to the physiological activities necessary for maintaining life, at least two other matters in regard to the newborn are of interest to us. One is his reflex activities. These include gasping, coughing, choking, sneezing, swallowing, and many others. Let us consider a few others that are of peculiar concern because of the light they throw upon the development of the nervous system. One is the *grasping* or so-called *Darwinian reflex*. It is, of course, a matter of common observation that a very small baby will clasp its fingers around a stick or around an adult's finger and "hold on for dear life." Indeed, some babies, experimentally, have demonstrated their ability to support their own weight in this fashion for several seconds. The point of significance here, however, is not the length of time the baby can continue this grasp, nor yet the evolutionary significance that Darwin stressed. The matter which concerns us is that normally this reflex disappears as the nervous system develops. It is considerably weakened by the end of the first month and is usually gone by the end of the third or fourth month. (Table XIII, page 146.) Cases are on record, however, of defective children in whom it persisted much longer, since the nervous system in these children was not developing normally.

The *Babinski reflex* is an extension of the great toe and a fanning out of the other toes when the sole of the foot is stimulated. Most authorities agree that this reflex is due to certain immaturities of the nervous system. It is present at birth in most children and in cases where it does not appear in early infancy, it is thought that sufficient maturity may have been attained before birth so that the reflex has already disappeared. In time it gives way to the more mature *plantar reflex* in which the toes flex under when the sole of the foot is stimulated. (Some infants display the plantar reflex also.) The Babinski reflex usually disappears during the latter half of the first year—about the time that walking begins. Some authorities believe that, if the Babinski reflex persists until the second year, it is indicative of a defective nervous system. Certain it is that in adults who have central nervous system involvements, the Babinski reflex returns, and in such cases, its appearance is considered definitely diagnostic.

Another reflex, first described by Moro, is a kind of clasping reflex elicited by a tap on the abdomen or by shaking or moving the support upon which the infant lies. The *Moro reflex* likewise occurs because of cortical immaturity and as a rule is not evident after the first 3 or 4 months, persistence beyond that time being associated with other retardation. The characteristic movements include throwing the arms wide apart and then bringing them together again, bow fashion. At the same time the legs are going through similar arcs. There is no necessity, for purposes of this text, to argue through the research controversies as to the relation—if any—between the Moro reflex and the so-called *startle response* characteristic of all humans from infancy throughout life. Landis and Hunt (71), authorities in this field, feel that it is an error to identify the two.

Reference to Table XIII will indicate the presence of the *tonic-neck reflex,* which persists for about the first 3 or 4 months. While in the supine position the infant rarely holds his face forward. It is usually turned to one side. The arm on the same side of the body is usually extended out beyond the face, while the other arm is drawn up toward the chest or often nested at the back of the head. The extended arm, or rather the one that is extended most of the time, "is the dominant arm (and hand) as determined in feeding, play, and normative examination situations at 1 and 5 years of age," according to Gesell and Amatruda (45). However, it must not be understood that the infant assumes one position and maintains it constantly. When he does turn his head to the other side, by windmill-like movements he again extends the face arm and draws up the other arm to chest, shoulder, or occiput position.

Emotions in Infancy

The other matter of interest at this point is the primary emotions which a child brings into the world with him. As a result of his experimental work on infants, Watson (117) claimed that they are capable of three unlearned emotional responses at birth. When support was withdrawn or loud noises were sounded, these infants responded, Watson says, with behavior indicating *fear.* Whenever the movements of the infant were hampered, he responded with *rage;* and whenever any of the erogenous or sex-sensitive areas of the body were stimulated, the infant responded with *love* or *sex* behavior.

Two types of experiment within recent years have led psychologists to question the infallibility of Watson's findings. Pratt, Nelson, and Sun (92) found that infants do not always respond to the above-named stimuli in the ways that Watson's infants did.

Sherman (103, 104) likewise did not get the responses found by Watson, but did get some of Watson's responses to stimuli other than those used by Watson. Furthermore, Sherman contends that we cannot tell from the infant's behavior what emotion he is experiencing. This was discovered by showing motion pictures of infants' behavior to medical and psychological students and to nurses. When the films where shown in proper sequence—that is, stimulus first and then the response of the infant—these adults agreed fairly well as to what emotion the infant was displaying. When, however, the film was cut and the sequence of stimuli and response was changed, there was little or no agreement among observers as to what emotion was being portrayed. Similarly, if the pictures showing the stimuli were omitted and only the infants' responses were shown, these adults were unable to say what emotion the infants were feeling. All of this indicates that it is unsafe to judge what emotion is being experienced by a child who cannot talk (53, 103, 104).

Sleep

As indicated above, a large part of the psychology of infancy rests upon physical matters. For this reason, it is necessary to consider the questions of sleep and of feeding. Psychiatrists tell us now that the security given to an infant by regularity of sleeping and of feeding plays a very significant role in the development of poise and serenity throughout childhood and adult life. There are probably no violations of child-training principles that more often give pangs to social workers and nurses than the violations which they witness in matters of sleep and feeding. Who has not seen young infants in the movies at night or being carried in arms to amusement parks or county fairs? In such cases, when the baby frets, he is likely to be given a few "sucks" on a lollipop or an ice cream cone!

Some interesting studies have recently been made upon the posture assumed by infants in sleep. These researches need not detain us here. The matter which is all-important for our present purposes is that we be able to help mothers understand the importance of proper sleep for infants and help them institute regular and sufficient hours of sleep. It has been said that the child grows while he sleeps. At any rate, his very rapid growth makes necessary sufficient time for rebuilding and upbuilding. The University of Minnesota Institute of Child Welfare (114) gives the following (Table IX) as indicating, not the hours children should sleep, but the hours 1000 children in their own homes actually do sleep.

A glance at Table IX will show the wide range of differences between the longest and the shortest sleepers. However, a few rather important considerations are somewhat obscured, perhaps, in this table. The sleep of an infant during the first month should undoubtedly be

Table IX[1]

HOURS OF SLEEP

Age	*Shortest Sleepers (Lower 10%)*		*Average Child*		*Longest Sleepers (Upper 10%)*	
	Hours	*Minutes*	*Hours*	*Minutes*	*Hours*	*Minutes*
1 mo. to 6 mo.	13	00	15	3	16	40
6 mo. to 1 yr.	12	12	14	9	15	40
1 yr. to 1½ yr.	11	50	13	23	14	33
1½ yr. to 2 yr.	11	47	13	6	14	00
2 yr. to 3 yr.	11	22	12	42	13	30
3 yr. to 4 yr.	10	53	12	7	12	59
4 yr. to 5 yr.	10	31	11	43	12	28
5 yr. to 6 yr.	10	14	11	19	11	56
6 yr. to 7 yr.	10	2	11	4	11	34
7 yr. to 8 yr.	9	53	10	58	11	29

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[1] From Institute of Child Welfare, *The Sleep of Young Children*, Circular No. 4, 1930, by permission of the University of Minnesota Press.

much greater than the sleep during the fifth month. Suffice it to say that the newborn child probably should sleep most of the time that he is not being fed or bathed. The White House Conference Report (6) shows that in 3,000 typical American homes infants under 6 months of age sleep about 16½ hours, whereas those from 6 months to a year sleep a little more than 15 hours out of 24. Of course, daytime sleep decreases in amount sooner than night sleep. Interestingly enough, in practically all studies that have been made on the length of sleeping time of young children, it has been shown that they actually sleep considerably less than is usually recommended.

Naturally, a 6-months-old child needs, in addition to sleep, sensory experiences that he can get only when he is awake. The greater danger by far, however, lies on the side of too little rather than too much sleep. Perhaps for adults sleep "knits up the raveled sleeve of care," but for young children a large part of the function of sleep is to keep the sleeve from becoming raveled.

Infant Feeding

On the question of feeding, it is not in place here to go into detail as to amounts and formulae. Such discussion belongs to the field of the physician and nutritionist. Anyone who desires to be familiar with approved practice on these points, however, will find much help in reading some of the references (3, 31, 32, 33, 34, 47, 61, 70, 88, 94, 102, 111) cited at the end of this chapter.

It may be necessary to mention a few principles with which the professional worker should be familiar. Perhaps one of the most common-sense observations, but one which is commonly overlooked, is that, no matter how much milk or other liquid a baby is getting, he still needs *water*.

Another matter of importance pertains to the amount of food to be taken by children. There is not much danger that we shall inflict upon the *infant* more food than he needs. He sees to that by simply refusing to take more than he needs or wants. With children a little older, however, parents sometimes make a fetish of an adult-determined menu. Some such parents become obsessed with the idea that certain foods are good for children and insist that "the plate must be cleaned up." In the name of conscience, why should any adult know just how many spoonfuls of spinach or carrots are necessary at every meal in the course of a week? Exercise, sleep, and emotional disturbances cause normal variation in food requirements from one meal to another. This important matter will be considered again in connection with habit formation of children.

The question of breast feeding is of great importance. It is undoubtedly good for the mother, in most cases, since it aids the uterus to return to its normal condition. Furthermore, food chemists tell us that ordinarily mother's milk is the best formula for a baby that can be found. For this reason, very carefully controlled systems of supplying human milk to children deprived of their own mother's milk operate through milk depots and mothers' milk registries.

Because of the emotional satisfaction to both mother and child, the protection of the baby's health through greater cleanliness and better nutrition, the ease of preparation and feeding, most mothers prefer to nurse their babies at the breast. However, a certain number of mothers do not want to nurse their babies. Some of these are those women still so immature that they hate to face parenthood and want to have as little to do with their infants as possible. Many such simply refuse to nurse their babies. In some cases, undoubtedly the obstetrician, sensing the mother's hostility and rebellion, feels that her attitude *and* her milk would be undesirable for the baby and recommend immediate weaning. Fries cites cases where cinema records indicate clearly that even the way such a mother holds her baby to the breast is indicative of her rejecting feeling toward the child. (See references in Chapter III.)

Many hospitals are so convinced of the necessity of fondling and close physical contact while an infant is nursing that such is even prescribed on the order chart for those babies who must be fed by bottle. "This baby must be held in someone's arms while taking the bottle" (8). Certainly this is a precaution that is not taken in most orphanages, asylums, and almshouses, and it is one of the reasons why institutionalization of infants is never recommended if there is any other possibility.

Ribble (96) feels that very widespread physiological and psychological effects result from breast feeding and the mothering that should go with it. She mentions the following as "favorable effects of unrestricted sucking" (95): Deeper and more regular breathing (all of which stimulates flow of blood to the brain with attendant brain development); better sleep, digestion and elimination; earlier focusing of eyes and grasping of objects; earlier vocalization and articulate speech. Since Ribble reports no scientific control of the innumerable factors that bring about infant development, it is hard to say how much of the physiological and psychological superiority of her group of babies was due to "unrestricted sucking." However, there has been no question in the minds of pediatricians and psychologists for a number of years that the early nursing and feeding experiences of a child do have a profound effect upon the child's personality and his reactions to people and to life in general, as well as upon his health. Sherbon (102) says: "With very, very few exceptions, every mother *can* nurse her baby. With almost no exception, every mother *should* nurse her baby."

In addition to breast feeding, physicians today recommend the introduction of supplementary foods, such as orange juice and certain vegetable purees, as early as the second or third month. This not only increases the supply of needed nutriments, but helps to prevent abrupt and emotionally devastating weaning from the breast.

In this connection, we may stop long enough to mention an obsession that many modern parents have developed. For the last few years we have been told that we should not feed a baby every time he cries. Instead, the instructions say, we should accustom him to regular feeding periods with regular intervals between in which he should not be fed even if he does cry. Now, this program may be and probably is sound doctrine for babies that are well and babies that are receiving adequate nourishment from their food. One can but wonder, however, what happens physically and emotionally to those unfortunate babies that are allowed to cry hour on end before some grown-up discovers that *the child is actually hungry!* Regularity of time and of amount do not necessarily guarantee that a child is being *adequately* fed. Would that we could learn to temper scientific or professional advice with common sense!

Anderson (6) says, in speaking of data supplied to the White House Conference, that two thirds of American infants are weaned by the age of 7 months and 93 per cent by the age of 10 months. Decision in those cases in which, for health reasons, breast feeding must be discontinued earlier than usual belongs, of course, to the physician. The question of weaning, however, introduces psychological as well as physiological factors of importance. Any food provides a pleasure experience to the child who is hungry. Furthermore, on account of the extreme sensitivity of the lips and mouth spoken of before, any feeding experience which stimulates these nerve endings is peculiarly satisfying to the infant. Both these factors are provided by the breast of the mother. Whether we interpret these pleasures as being sexual in nature, as the psychoanalytic school of thought does, depends, of course, upon the meaning we give to the words *sex* and *sexual*. Certainly when negative emotions are quieted and positive emotions are enhanced in the infant by breast feeding, the sum-total effect on the child is upbuilding and satisfying. These feelings may provide a primitive prototype of later bodily pleasures and gratifications, which on a broader scale may be called *physical, physiological,* or, if one prefers, *sexual.*

If the satisfaction of breast feeding is abruptly withdrawn, as happens in sudden weaning, no one will deny that temporarily, at least, there is considerable emotional disturbance for the child. Anyone who has seen the experiment tried will bear witness to the fact. Whether one wishes to go so far as to agree with Susan Isaacs (67) that "the most serious disturbances in mental life are undoubtedly associated with severe deprivations in the suckling period" will depend upon the amount of proof one requires for the acceptance of a generalization. Perhaps no one will deny, either, that weaning, if postponed too long or accomplished too suddenly, may temporarily arouse hostile feelings toward the mother on the part of the child. It would seem somewhat unsafe, however, to go so far as some psychoanalysts have gone in saying that such an experience is the beginning of ambivalent (that is, contradictory emotional) or even hostile attitudes toward the mother. One might just as well say that unpleasant ear-washings, administration of bitter medicine, or spankings foster hostile feelings toward parents. The fact of the matter is, as every social worker knows, that the child as a rule will tolerate an enormous amount of physical and emotional abuse at the hands of parents and still love the parents and prefer to "go back home with mother." This is not overlooking the fact, of course, that all normal individuals of whatever age probably have some ambivalent attitudes toward those they love most dearly.

The possible relationship between oral—that is, mouth—satisfactions and deprivations on the one hand and speech defects on the other hand, or between "weaning trauma" and such behavior disorders as kleptomania have been stressed by the psychoanalysts. If, in rare individual cases, such relationships do give a clue to therapeutic practices, we should welcome all such information. With the rarity of cited instances in which such relationships can be suspected, it seems, at present, unwise to *generalize* therefrom. For practical purposes we may perhaps with safety and without fear of much contradiction make the following statements. *First,* no pleasure is much greater to the young infant than those pleasures connected with sucking, biting, or other mouth and tongue activities. He is entitled to a reasonable amount of such satisfactions. A deprivation at this point may result in a certain amount of frustration that produces fretfulness, loss of sleep, irritability, and widespread emotional disturbance. *Secondly,* from what we know about the principle of *conditioning* or connecting emotions with the source from which they arise, it is easy to see how the infant's pleasures very early in life are primarily associated with the physical satisfaction which the mother provides. This undoubtedly lays the foundation upon which later relationships with the mother will rest. It does not follow, of course, that every child who has to be weaned early will grow up hating his mother. In the *third* place, it would seem that, for the sake of wholesome emotional development, the range of "satisfiers" for the child should soon be extended beyond the mother. For this reason, we should question the wisdom of a mother's nursing her baby into the second or third year, or even later, as happens occasionally in unfortunate cases. By exactly the same token, of course, we should question the wisdom of allowing a child the pleasure of sleeping with his mother. Such treatment results in fixation and emotional narrowing. In the *fourth* place, from what we know about the laws of habit formation, it is evident that the breaking of *any* habit is likely to be accompanied by a feeling of "being lost," being unsure of oneself, and of general inadequacy. For this reason, it is only fair to the child to make the weaning process as gradual and uneventful as possible. The introduction of supplementary foods mentioned above, given at first by a spoon held in the hand of an adult, water or fruit juice given by bottle, or any other extension of feeding satisfactions will make the removal of the breast in weaning less of a shock, both emotionally and physiologically, than would otherwise be true (9, 11, 27, 47, 95, 96).

Toilet Processes

While considering some of the innate satisfactions, we may pause for a moment's consideration of evacuation from the body. It seems safe to say that the normal functioning of all organs and systems within the body should be, and as a rule is, accompanied by a sense of well-being and should normally not involve any pain. Toileting is perhaps no exception to this general statement, even though we may not wish to go so far as some who insist that *innately* there is great pleasure in evacuation and in getting various sense impressions from excreta. There would appear to be no reason why, if this were true in one field of elimination, it might not also be true in regard to perspiration or salivation. It is obvious also that normal elimination of the body waste-products will be intimately connected with bodily tone and health generally. It is doubtful whether we need go much farther than this. It seems like nothing but verbal analogy to say that a child who is constipated will be stubborn or selfish because, forsooth, *he will not give up!* This does not deny for a moment that, if a child's life is made miserable by an adult who insists upon too early or too meticulous toilet training, the child may become rebellious, irritable, ill, or *constipated.* Occasionally, a child may even deliberately refuse coöperation in toilet habits with one individual and not with another. Modern child training suggests that after about four months, let us say, it may be well to determine the child's natural time for bowel movements and, at that time, to hold him over a small vessel. Likewise, if a child can learn to be more comfortable dry than wet, much has been accomplished. Just the minute, however, either adult or child becomes emotional over any item of toilet routine, just the moment that toilet comes to be associated unpleasantly in the child's mind with the adult, then training *per se* is getting out of bounds and would be better forgotten for the time being. We shall have more to say about such habit training in a subsequent chapter.

The White House figures (6) show that, in American families, bowel control is established before bladder control, but that few children under one year of age have established either. The same study shows that, although girls establish control earlier than boys, 90 per cent of both boys and girls have control by the end of the second year. Nurses and social workers will feel no surprise in learning from this report that both bladder and bowel control are established at later and later ages as we move from higher to lower socio-economic classes.

Growth

Perhaps the best way we have of knowing whether the proper physical environment is being provided for the baby is by watching his growth (7, 38). The average child at birth weighs from 7 to 8 pounds and is around 20 inches in height, or should we say length? As a rule, children actually lose weight for a few days after birth for reasons which we need not take up. This loss, however, is usually regained by from 10 days to 2 weeks. As a fairly safe rule-of-thumb, we may say that the child should double his birth weight

TABLE X *[2]

WEIGHT-HEIGHT-AGE TABLE FOR WHITE BOYS FROM BIRTH TO 1 YEAR

Height in inches	Average weight in pounds for each month of age (without clothes)											
	Less than 1 month	1 month but less than 2	2 months but less than 3	3 months but less than 4	4 months but less than 5	5 months but less than 6	6 months but less than 7	7 months but less than 8	8 months but less than 9	9 months but less than 10	10 months but less than 11	11 months but less than 12
17	5½	......	......	......	......	......	......	......	......	......	......	......
18	6½	......	......	......	......	......	......	......	......	......	......	......
19	7½	7½	......	......	......	......	......	......	......	......	......	......
20	8	8½	9	......	......	......	......	......	......	......	......	......
21	9	9½	10	10½	10½	......	......	......	......	......	......	......
22	10	10½	11	11½	11½	11½	12	......	......	......	......	......
23	10½	11½	12	12½	13	13	13	13½	14	......	......	......
24	11½	12½	13	13½	14	14	14½	14½	15	15	15	......
25	12½	13½	14	14½	15	15½	15½	15½	16	16	16	16½
26	......	14	15	15½	16	16½	16½	17	17	17	17½	18
27	......	......	16	16½	17	17½	18	18	18½	18½	18½	19
28	......	......	......	17½	18	19	19	19	19½	19½	19½	20
29	......	......	......	......	19½	20	20	20½	20½	20½	20½	21
30	......	......	......	......	......	21½	21½	21½	21½	21½	22	22
31	......	......	......	......	......	......	22½	23	23	23	23	23
32	......	......	......	......	......	......	......	24	24	24	24	24
33	......	......	......	......	......	......	......	......	......	......	25½	25

WEIGHT-HEIGHT-AGE TABLE FOR WHITE GIRLS FROM BIRTH TO 1 YEAR

Height in inches	Average weight in pounds for each month of age (without clothes)											
	Less than 1 month	1 month but less than 2	2 months but less than 3	3 months but less than 4	4 months but less than 5	5 months but less than 6	6 months but less than 7	7 months but less than 8	8 months but less than 9	9 months but less than 10	10 months but less than 11	11 months but less than 12
17	5½	......	......	......	......	......	......	......	......	......	......	......
18	6½	6½	......	......	......	......	......	......	......	......	......	......
19	7	7½	8	......	......	......	......	......	......	......	......	......
20	8	8½	9	9	......	......	......	......	......	......	......	......
21	8½	9½	9½	10	10½	11	11	......	......	......	......	......
22	9½	10	10½	11	11½	12	12	12	12½	......	......	......
23	10	11	11½	12	12½	13	13	13	13½	13½	13½	......
24	11	12	12½	13	13½	14	14	14	14½	14½	14½	14½
25	11½	13	13½	14	14½	15	15	15½	15½	15½	16	16
26	......	14	14½	15	15½	16	16	16½	16½	16½	17	17
27	......	......	15½	16	16½	17	17	17½	17½	18	18	18
28	......	......	......	17	17½	18	18½	18½	19	19	19	19
29	......	......	......	......	19	19	19½	20	20	20	20	20
30	......	......	......	......	......	20	20½	21	21	21	21	21½
31	......	......	......	......	......	......	21½	22	22	22	22½	22½
32	......	......	......	......	......	......	......	......	23	23½	23½	23½
33	......	......	......	......	......	......	......	......	......	......	......	24½

* Reanalysis of the weight, height, and age of 20,299 white boys and of 19,493 white girls under 12 months of age, examined in Children's Year (1918-19). The number of Negro boys and girls measured and weighed was not sufficiently large to provide comparable data.

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[2] From *Infant Care*, Publication No. 8, by permission of the Children's Bureau.

Table XI[3]

WEIGHT-HEIGHT-AGE TABLE FOR WHITE GIRLS BETWEEN 1 AND 6 YEARS OF AGE*

Height in inches	Average weight in pounds for each specified age (without clothes)						
	1 year but less than 1½	1½ years but less than 2	2 years but less than 2½	2½ years but less than 3	3 years but less than 4	4 years but less than 5	5 years but less than 6
25	14½						
26	16						
27	17	17½					
28	18½	18½	18½				
29	20	20	20				
30	21	21	21½	21½			
31	22½	22½	22½	22½	23		
32	23½	24	24	24	24		
33	25	25	25	25½	25½	25½	
34	26½	26½	26½	26½	26½	27	
35	27½	27½	28	28	28	28	
36		29	29	29	29½	29½	29½
37		30½	30½	30½	30½	31	31
38			31½	32	32	32	32½
39			33	33	33	33½	33½
40				34½	34½	34½	35
41				35½	36	36	36
42					37	37½	37½
43					38½	38½	39
44					40	40	40
45						41	41½
46						42½	42½
47							44
48							45½
49							46½

* Reanalysis of weight, height, and age of 62,160 white girls between 1 and 6 years of age examined in Children's Year.

by 6 months and triple it by one year. Tables X, XI, and XII are included in order that the reader may have a ready source of reference in the matter of approximations. If a given child deviates slightly from these figures, however, it may be that nothing abnormal whatever is signified. Too close observance of height-weight tables may become harmful. This is particularly true in the case of the nursing mother, who, in her anxiety, may weigh the baby two or three times a day. If she thinks he is not gaining as he should, she becomes disturbed, her milk changes, the baby is inadequately nourished and loses more weight; thus a vicious circle is established.

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[3] From *The Child from One to Six*, Publication No. 30, by permission of the Children's Bureau.

Table XI[4]—Cont.

WEIGHT-HEIGHT-AGE TABLE FOR WHITE BOYS BETWEEN 1 AND 6 YEARS OF AGE*

Height in inches	Average weight in pounds for each specified age (without clothes)						
	1 year but less than 1½	1½ years but less than 2	2 years but less than 2½	2½ years but less than 3	3 years but less than 4	4 years but less than 5	5 years but less than 6
25	15						
26	16½						
27	17½	18					
28	19	19					
29	20½	20½	20½				
30	21½	22	22	22			
31	23	23	23	23½			
32	24½	24½	24½	24½	25		
33	25	26	26	26	26		
34	27½	27	27	27½	27½	27½	
35	28½	28½	28½	28½	28½	29	
36		29½	30	30	30	30	30½
37		31	31	31½	31½	31½	32
38		32½	32½	32½	32½	33	33
39			34	34	34	34	34½
40			35	35	35½	35½	35½
41				36½	36½	37	37
42				38	38	38	38½
43					39½	39½	39½
44					40½	41	41
45						42	42½
46						43½	43½
47						45	45
48							46½
49							47½

* Reanalysis of weight, height, and age of 63,547 white boys between 1 and 6 years of age examined in Children's Year.

Another method of determining the amount of growth is by means of X-ray pictures of the bones. The bones of infants and young children contain a large amount of cartilage and fibrous matter, hence their softness and susceptibility to deformity. As growth proceeds, mineralization of the bones takes place. The hand and wrist provide excellent opportunity for X-ray examination of mineralization (94). Tables have been worked out with which given X-ray pictures may be compared in arriving at the "bone age" of a particular child. It must be kept in mind, however, that the phenomenon of "individual differences," within the range of normality, applies to bone development just as it does to all phases of neurological, physical, mental, emotional and social measurement. *Extremes* of bone development in either direction, however, can be easily identified by this technique.

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[4] From *The Child from One to Six*, Publication No. 30, by permission of the Children's Bureau.

Table XII[5]

WEIGHT-HEIGHT-AGE TABLE FOR GIRLS

Height Inches	5 Yrs.	6 Yrs.	7 Yrs.	8 Yrs.	9 Yrs.	10 Yrs.	11 Yrs.	12 Yrs.	13 Yrs.	14 Yrs.	15 Yrs.	16 Yrs.	17 Yrs.	18 Yrs.
38	33	33	....	....	....	....	....	....	....	....	....	....	....	....
39	34	34	....	....	....	....	....	....	....	....	....	....	....	....
40	36	36	36	....	....	....	....	....	....	....	....	....	....	....
41	37	37	37	....	....	....	....	....	....	....	....	....	....	....
42	39	39	39	....	....	....	....	....	....	....	....	....	....	....
43	41	41	41	41	....	....	....	....	....	....	....	....	....	....
44	42	42	42	42	....	....	....	....	....	....	....	....	....	....
45	45	45	45	45	45	....	....	....	....	....	....	....	....	....
46	47	47	47	48	48	....	....	....	....	....	....	....	....	....
47	49	50	50	50	50	50	....	....	....	....	....	....	....	....
48	....	52	52	52	52	53	53	....	....	....	....	....	....	....
49	....	54	54	55	55	56	56	....	....	....	....	....	....	....
50	....	56	56	57	58	59	61	62	....	....	....	....	....	....
51	....	....	59	60	61	61	63	65	....	....	....	....	....	....
52	....	....	63	64	64	64	65	67	....	....	....	....	....	....
53	....	....	66	67	67	68	68	69	71	....	....	....	....	....
54	....	....	....	69	70	70	71	71	73	....	....	....	....	....
55	....	....	....	72	74	74	74	75	77	78	....	....	....	....
56	....	....	....	....	76	78	78	79	81	83	....	....	....	....
57	....	....	....	....	80	82	82	82	84	88	92	....	....	....
58	....	....	....	....	....	84	86	86	88	93	96	101	....	....
59	....	....	....	....	....	87	90	90	92	96	100	103	104	....
60	....	....	....	....	....	91	95	95	97	101	105	108	109	111
61	....	....	....	....	....	....	99	100	101	105	108	112	113	116
62	....	....	....	....	....	....	104	105	106	109	113	115	117	118
63	....	....	....	....	....	....	....	110	110	112	116	117	119	120
64	....	....	....	....	....	....	....	114	115	117	119	120	122	123
65	....	....	....	....	....	....	....	118	120	121	122	123	125	126
66	....	....	....	....	....	....	....	....	124	124	125	128	129	130
67	....	....	....	....	....	....	....	....	128	130	131	133	133	135
68	....	....	....	....	....	....	....	....	131	133	135	136	138	138
69	....	....	....	....	....	....	....	....	....	135	137	138	140	142
70	....	....	....	....	....	....	....	....	....	136	138	140	142	144
71	....	....	....	....	....	....	....	....	....	138	140	142	144	145

PREPARED BY BIRD T. BALDWIN, PH.D., AND THOMAS D. WOOD, M.D.

When taking measurements, remove the child's outdoor clothing, shoes, and coat. Take heights with a square, consisting of two flat pieces of wood joined at right angles (a chalk box will serve). The child is placed in a good erect position, with heels and shoulders against the wall or wide board, upon which has been marked or pasted an accurate measure. Age is taken to the nearest birthday.

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TABLE XII—Cont.

WEIGHT-HEIGHT-AGE TABLE FOR BOYS

Height Inches	5 Yrs.	6 Yrs.	7 Yrs.	8 Yrs.	9 Yrs.	10 Yrs.	11 Yrs.	12 Yrs.	13 Yrs.	14 Yrs.	15 Yrs.	16 Yrs.	17 Yrs.	18 Yrs.
38	34	34	....	....	....	....	....	....	....	....	....	....	....	....
39	35	35	....	....	....	....	....	....	....	....	....	....	....	....
40	36	36	....	....	....	....	....	....	....	....	....	....	....	....
41	38	38	38	....	....	....	....	....	....	....	....	....	....	....
42	39	39	39	39	....	....	....	....	....	....	....	....	....	....
43	41	41	41	41	....	....	....	....	....	....	....	....	....	....
44	44	44	44	44	....	....	....	....	....	....	....	....	....	....
45	46	46	46	46	46	....	....	....	....	....	....	....	....	....
46	47	48	48	48	48	....	....	....	....	....	....	....	....	....
47	49	50	50	50	50	50	....	....	....	....	....	....	....	....
48	....	52	53	53	53	53	....	....	....	....	....	....	....	....
49	....	55	55	55	55	55	55	....	....	....	....	....	....	....
50	....	57	58	58	58	58	58	58	....	....	....	....	....	....
51	....	....	61	61	61	61	61	61	....	....	....	....	....	....
52	....	....	63	64	64	64	64	64	64	....	....	....	....	....
53	....	....	66	67	67	67	67	68	68	....	....	....	....	....
54	....	....	....	70	70	70	70	71	71	72	....	....	....	....
55	....	....	....	72	72	73	73	74	74	74	....	....	....	....
56	....	....	....	75	76	77	77	77	78	78	80	....	....	....
57	....	....	....	....	79	80	81	81	82	83	83	....	....	....
58	....	....	....	....	83	84	84	85	85	86	87	....	....	....
59	....	....	....	....	....	87	88	89	89	90	90	90	....	....
60	....	....	....	....	....	91	92	92	93	94	95	96	....	....
61	....	....	....	....	....	....	95	96	97	99	100	103	106	....
62	....	....	....	....	....	....	100	101	102	103	104	107	111	116
63	....	....	....	....	....	....	105	106	107	108	110	113	118	123
64	....	....	....	....	....	....	....	109	111	113	115	117	121	126
65	....	....	....	....	....	....	....	114	117	118	120	122	127	131
66	....	....	....	....	....	....	....	....	119	122	125	128	132	136
67	....	....	....	....	....	....	....	....	124	128	130	134	136	139
68	....	....	....	....	....	....	....	....	....	134	134	137	141	143
69	....	....	....	....	....	....	....	....	....	137	139	143	146	149
70	....	....	....	....	....	....	....	....	....	143	144	145	148	151
71	....	....	....	....	....	....	....	....	....	148	150	151	152	154
72	....	....	....	....	....	....	....	....	....	....	153	155	156	158
73	....	....	....	....	....	....	....	....	....	....	157	160	162	164
74	....	....	....	....	....	....	....	....	....	....	160	164	168	170

PREPARED BY BIRD T. BALDWIN, PH.D., AND THOMAS D. WOOD, M.D.

These tables were constructed from measurements made on a group of presumably healthy children, most of whom are native-born. They show the *average* weight for height and age and sex. *Individual* children of the same age and height *normally* show wide variation in weight due principally to the width and depth of the skeletal framework. Body width and depth are as important as height in determining body weight. This fact should be kept in mind in interpreting the *significance* of deviation from average weight for height. Weight for height alone is not a dependable index of nutritional status.

Locomotion

The development of some form of locomotion in infancy is not only a fascinating function to watch, but also is of extreme importance in aiding proper growth. Usually by 8 months some form of getting from here to there has evolved. Commonly *crawling,* with the abdomen touching the floor or the bed, comes first; followed by *creeping,* in which the body is raised and is supported by the arms and knees. Relative strength of arm and leg muscles sometimes causes a baby to creep away from, rather than toward the desired object, much to the bewilderment of the baby. Needless to say, the introduction of locomotion brings about a great change; it not only increases the responsibility of the adult, but it also opens to the baby an increasing sphere of influence. One of the most detailed researches on how children learn to walk is to be found in the work of Shirley (106). Dr. Shirley studied 25 infants continuously over a period of 2 years. After the babies had progressed through their preliminary locomotor attempts and were old enough to begin the hazardous task of walking, Dr. Shirley devised a clever scheme for graphic rating. She used unglazed, white wrapping paper, 12 inches wide, which was stretched the length of the baby's own living-room floor. The soles of his feet were then greased with olive oil and he was turned loose to "walk" along the paper path. As he did so, he left his olive-oil track behind him. In the laboratory, later, the paper was brushed with lamp black and other substances to make the records more or less permanent. "Assistants who did the detailed measuring of each record became so familiar with each baby's walking foibles that they usually guessed whose record they were measuring before they read the name on the paper."[6] Great individual differences were noted, but, on the other hand, there was significant consistency throughout the developmental record of any one child.

Dr. Shirley found that standing alone did not occur in most babies until they were able to walk alone. She concludes that, among the babies she studied, prediction could be made as to when the next developmental process would be manifest. For example, when stepping movements first appeared, it could be expected that the baby had reached one-fifth of his walking age; that is, if he were making stepping movements at 3 months, he would probably be walking at 15 months. Likewise, sitting well on an adult's lap would indicate that one-third of the walking age had been attained; standing with help or sitting alone would evidence one-half of the walking age; and creeping, two-thirds of the walking age.

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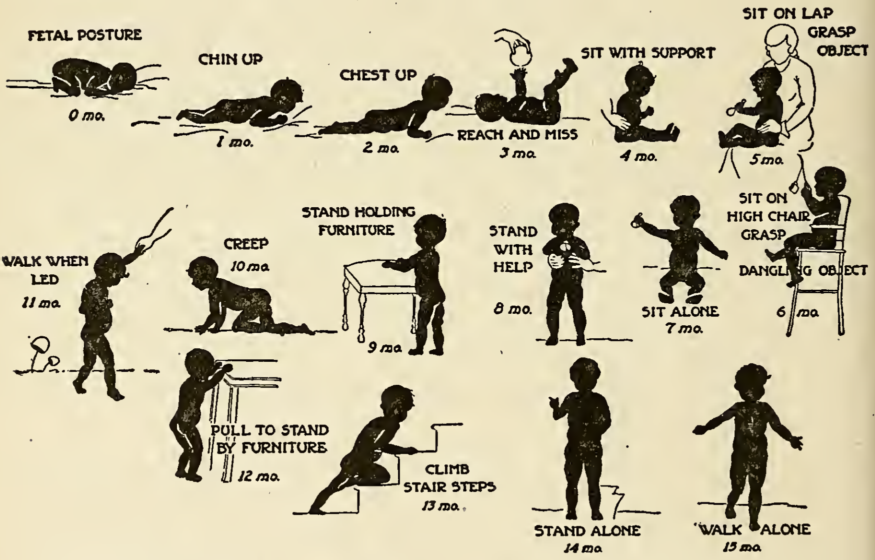
[6] From Mary M. Shirley, *The First Two Years. Postural and Locomotion Development,* by permission of University of Minnesota Press, Minneapolis, Minn.

All studies on walking agree that while it *may* appear as early as 7, 8, or 9 months or as late as 18 or 20 months, by far the commonest age is around 12 months. Obviously, walking may be delayed by illness, by a fright during an early attempt at standing or walking, by overweight, rickets, limit of floor space, slippery floors, improper shoes, hampering clothes, lack of toys or other inducement, or too much adult attention. Many babies probably *could* walk alone earlier if they only knew or thought they could. It is not unusual to see an infant, during the time of his first excursions under his own steam, put the tips of his fingers on the wall, hold onto his mother's skirt, or even, for that matter, to his own clothes, thinking thereby he will get support. At least, he does get moral support. Dr. Shirley (106) makes an interesting observation of her experimental work. During the early stages of walking, and after some restrictions as to time and place had been imposed upon the young adventurers, Shirley's babies tended to become self-conscious. When they did so, they "reverted" to playing with their toes or their shoes. This regression to a lower level of habits on account of emotion is pro-


FETAL POSTURE
0 mo.
CHIN UP
1 mo.
CHEST UP
2 mo.
REACH AND MISS
3 mo.
SIT WITH SUPPORT
4 mo.
SIT ON LAP
GRASP
OBJECT
5 mo.
SIT ON
HIGH CHAIR
GRASP
DANGLING OBJECT
6 mo.
SIT ALONE
7 mo.
STAND
WITH
HELP
8 mo.
STAND HOLDING
FURNITURE
9 mo.
CREEP
10 mo.
WALK WHEN
LED
11 mo.
PULL TO STAND
BY FURNITURE
12 mo.
CLIMB
STAIR STEPS
13 mo.
STAND ALONE
14 mo.
WALK ALONE
15 mo.

From The First Two Years, *by Mary M. Shirley. Used by special permission of the University of Minnesota Press.*

Figure 17—The Motor Sequence.

vocative of speculation in regard to some of the regressions seen in adult psychopaths.

Unfortunately, some children are retarded in walking because of a general retardation due to a defective nervous system. It is to be understood that, if a child appears normal in other developmental items and is slow *only* in walking, it is not fair to predict feeble-mindedness. Although feeble-minded children, on the average, are slow in learning to walk, a perfectly normal child may also be slow for any one or more of the reasons mentioned above. In a table of items indicating abnormal or defective neuro-motor development, Gesell and Amatruda (45) list the following concomitants of walking: failure to hold head erect after 12 weeks; failure to sit independently after 40 weeks; progression by arching the back while in supine position after 16 to 20 weeks; inability to walk after 18 months.

In this connection, it is interesting to notice also the relation of *walking* to general intellectual development in contrast to *talking* and general intellectual development. Obviously, talking is much more intellectual than walking, walking depending partly upon intelligence, but also largely upon gross motor ability and upon health. For this reason, feeble-minded children are likely not to be so retarded in walking as they are in talking. Conversely, exceptionally bright children are likely to be more accelerated in talking than in walking. Walking, as a rule, develops before talking except in the case of gifted children.

It sometimes happens that after a child has mastered a few of the first techniques in the art of walking he begins to talk. The speech may in such cases cause a kind of plateau in the learning curve for walking. Some parents report that after the child began to talk he seemed for a time almost to forget, or to lose interest in, walking. Conversely, if speech has begun first, it may be held in abeyance for a time with the advent of walking (4, 28, 81, 82, 89, 106).

Speech

To give an adequate account of the development of talking, we should probably need to go back to a discussion of a baby's crying, which is one of his vocalizations. Little of that need detain us here except to say that medical authorities are tending now to the opinion that a certain amount of crying is *not* necessary for development, as some used to say. Doctors feel that crowing, gurgling, and other forms of vocal exercise serve the same purpose better. An interesting psychology of baby's crying, however, can be developed. For example, while all babies do not cry alike, yet an individual baby very soon develops one cry which for him is characteristic of hunger, another of pain, another of anger. Close observers soon learn to distinguish not only the different cries of one baby, but also the differences between the cries of different babies. One feature of a baby's crying is often misunderstood, and this is that as a rule the sicker a baby is, the less loudly and lustily does he cry. The loud wails of a baby may be distressing to hear, but ordinarily do not indicate so much danger for the baby as does the low, feeble, plaintive cry.

It has been the observation of the writer that babies who have spent their lives in institutions cry less than babies reared in private homes. No doubt they early learn that crying does not get them much. Whether such early inhibitions are in the interest of good mental hygiene is a debatable point. (See discussion of inverse relation between overt emotional behavior and visceral behavior in Chapter X.)

Dr. Shirley (106) mentions the fluctuations in babblings and vocalizings as different motor skills develop. "While the reaching act was being perfected their vocal play was very much diminished."[7] As a result of the interrelations observed between vocalizing and motor skills, Dr. Shirley concludes[7]:

> A few babies who were slow at walking were great "talkers," to judge by quantity rather than quality of speech. . . . The substitute nature of speech response is very clearly illustrated by these observations. The baby who cannot act effectively takes it out in talking, it would seem, just as the adult does.

The happy vocalizing of a baby six months old sounds very different from that of a two-months-old. As the child progresses in his development, he adds more consonants to his repertoire. (63, 66, 74, 75, 106)

It is a profitable experience, and one which the students of the author always enjoy, to attempt to spell the babblings of infants. With a little analytical practice, one can work out a kind of key of his own for recording sounds, even though he may know nothing of the intricacies of the International Phonetic Alphabet. One will soon learn the differences between the reflex and random unemotional vowel sounds, like short e or short u sounds; the emotionalized vowel sounds uttered with much emphasis depending upon the emotional setting; the simple combination of vowel and consonant, such as ba (often quite explosive and salivary!) or da or ma; and finally the repetitive combinations like mumumumu or abababa. In a class demonstration the author once had an opportunity to examine two nine-months-old children. The one child, when she finally became oriented to her strange surroundings, would give out occasional eh, uh, long e, eeeee, oooo, and uuuuuu sounds. The prediction was made at that time that this nine-months-old child would not be having articulate speech for many months to come. The other infant, on the other hand, was a highly social child who responded socially, verbally, and articulately very early in the demonstration. One had the feeling that his speech contained emotionalized outpourings, a modicum of intellectual content, and a large measure of social relationship. After all, these constitute the core of language. This child babbled much of the time, and one of his favorite expressions was aba daba dada. These six connected syllables were uttered with much elocution. The prediction was made that this child would be using a recognizable vocabulary within perhaps 2 months. We had an opportunity to check these predictions about 9 months later. The first child, then 18 months of age, was not talking at all; the second child had spoken several recognizable words when he was 11 months old and at 18 months "seems never to stop talking. He has a vocabulary of probably 25 or 30 understandable words."

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[7] From Mary M. Shirley, *The First Two Years,* by permission of University of Minnesota Press, Minneapolis, Minn.

Most children are saying from 1 to 3 or more words at one year of age. These words, of course, may be inaccurately pronounced, but they are consistently pronounced and applied. By the end of the second year, the average child has a speaking vocabulary of more than 270 words. It is to be understood that at all times the child understands more words than he actually uses. In a succeeding chapter, we shall have more to say about the reciprocal relation between a child's vocabulary and his thinking.

Teeth

Because of the close relationship between general bodily development and eruption of teeth, it is well for us to know in general something of what constitutes normality here. As in all fields of development, there are wide individual differences in the age at which babies cut their teeth. Some infants, in fact, may even have a tooth or two at birth, although this is rare. On the other hand, some babies may reach almost the first milestone without a tooth. This is unusual also and would seem to indicate the wisdom of a good medical check-up to see whether the baby's diet is adequate or whether some disease entity is operating. By far the commoner thing is for the two lower central incisors to come through at about six or eight months. These are followed a little later by the upper central incisors. The lateral incisors come next and then the first molars. The canines or "eye teeth" follow, and lastly come the second molars. As a rule, the lower teeth erupt before the upper ones. As indicated above, there may be considerable variation from one child to another, but as a rough rule-of-thumb one can say with some degree of accuracy that babies are likely to have about one tooth for every month past six months. At one year of age a baby will probably have about six teeth; at eighteen months, twelve; at two years, sixteen; and at two and one-half years, the entire milk set of 20 teeth is likely to be through. We must always bear in mind that the eruption of teeth is as normal as any other phase of growth and should not be accompanied by any great physical disturbances. When a child becomes violently ill or has a convulsion with every tooth he cuts, the difficulty should not be blamed upon the teeth and be passed over lightly. Medical advice should always be sought in such cases.

Proper diet, hard toast, or other such foods to chew upon, and cleanliness in the care of the first teeth will, in most cases, go far toward the formation of good second teeth. Some parents feel it advisable to take the child to the dentist during the second and third year, even though no corrective work needs to be done, in order to build up a confident attitude toward the dentist, his chair, and his instruments. Children's dentists nowadays understand much better than the dentists of a generation or two ago the necessity of dealing skillfully with the child's emotions. The White House Conference Report (6) showed that over 20 per cent of the children two years old in urban homes had dental examination, as compared with something over 12 per cent in rural homes. Over 65 per cent of children two years old were found to have toothbrushes and about 55 per cent to brush their own teeth.

Stages of Development

In our discussion of walking, we quoted Shirley to show how one stage of locomotion can be used to predict the appearance of later stages. The same principle applies to other phases of development throughout the entire period of growth. For this reason, it is very important for anyone who is dealing with infants to have in mind a picture of what normal development is. The writer has been in the habit for a number of years of showing to her graduate classes in child psychology pictures of babies of different ages. The students are asked to examine the pictures carefully and to approximate the ages of the babies. The assignment usually produces much consternation and many students apologetically complain, "I never *can* tell how old a baby is!" Variations in estimates are extreme, sometimes being as great as 12 months on a one-month-old baby. It is obvious, of course, that one might display more skill in stating the age of a real baby in action than in estimating the age of pictured babies.

It is rather important, however, that we know something of what a one-month-old baby can do; a four-months-old baby; a six-months-old; and so on. Otherwise we shall not know whether a given child is developing normally, is much retarded, or is considerably ahead of most babies of his age. In case the baby is retarded, we need to know whether the retardation is caused by any remediable condition and, if so, take steps to have treatment started. In cases of child-placing, adoption, and other social-work measures, we must know not only the present developmental stage of the child, but we must also be able to predict *somewhat* as to his future development. We shall have more to say later about so-called "baby tests," but at this time we have in mind developmental norms which can be roughly checked by *observation.*

Now, there are two principles that we must understand and keep in mind if we are to avoid error in these matters. The first of these is that any one developmental feature, such as walking or talking or teething, may be delayed for some specific reason which may not pertain to other development features at all. For this reason, one must never make a diagnosis of a young child's retardation on the basis of *one* criterion alone. We have previously mentioned several factors, any one of which may delay a child's walking. It might very well happen that in such a child teething and talking would develop normally. To summarize this principle, then, we may say that development of a child should be measured by a cross section of his abilities and never by one ability or one disability.

The second principle follows naturally if we have observed the first. That is to say, if we find that in *several* particulars a child in spite of good health is considerably behind normal developmental standards, there is serious reason for thinking that the child *will be* retarded. One has probably never seen a child, barring cases of serious illness, who cut his first tooth at 14 months, sat alone for the first time at 15 months, did not recognize his own name until 18 months, did not walk alone until two and one-half years, and did not talk until three and one-half years who ever "caught up" and "became normal."

Nature does not work that way. Because of the approximate consistency of rate of growth within an individual, it is exceedingly important to have a general idea of what a normal rate of growth is. For this reason, we shall give a few suggestive items of development at different age levels throughout the first two years of life.

Obviously, health, social stimulation, and other environmental factors may produce considerable developmental variation among children even within the range of normality. Under anything like ordinary circumstances, however, the pattern is likely to be about as follows. The items in this table have been forced into *months* because outside a laboratory a child's age is more likely to be so designated. Scientific accuracy, however, prefers to give developmental norms in *weeks* of age during the very rapid development of the first year or so.

TABLE XIII

BEHAVIOR CHARACTERISTIC OF CERTAIN AGE LEVELS IN INFANCY

One Month:
- Facial expression somewhat vacant
- Stares
- In supine position, head to side most of time (see Four Months)
- In prone position often assumes "Mohammedan prayer" posture
- Tonic-neck reflex (see Four Months)
- In prone position, head may be lifted somewhat (see Four, Six Months)
- Held supported under arms, does not extend legs (see Four, Six Months)
- Some adjustment of back and body when held to adult shoulder
- Reflex clasping with fingers (see Six Months)
- Hands closed most of the time, although hand nearest face may open (see Four Months)
- Follows moving light with eyes, briefly
- Differential cries for hunger, pain, and anger (see Four, Six Months)

Four Months:
- In supine position, holds head in mid-position
- Holds head erect without support (see Six Months)
- Tonic-neck reflex passing away
- Rolls side to back, back to side (see Six Months)
- Sits on lap or on floor with some support
- Held supported under arms, extends legs recurrently (see Six Months)
- Makes anticipatory adjustment to being lifted
- Hands predominantly open
- Hand-mouth activity prominent (see Twelve Months)
- Plays with fingers and hands
- Reaches for and grasps objects
- Plays with rattle
- Splashes with hands in bath
- Follows disappearing object with eyes, looks for fallen objects
- Turns head at sound of voice or bell (see Six Months)
- Attends to sounds and to music
- Recognizes mother
- Smiles socially
- Laughs aloud
- Bubbles, coos, chuckles, gurgles (see Six Months)
- Makes most of the vowel sounds and some of the consonant sounds

Table XIII—Cont.

BEHAVIOR CHARACTERISTIC OF CERTAIN AGE LEVELS IN INFANCY

Six Months:
- Holds head erect without wobbling
- Sits alone with slight support from pillows
- Rolls from stomach to back and back to stomach
- Gets toes in mouth
- Held under arms, makes stepping movements
- In prone position, rests on hands, lower chest, abdomen, and thighs
- Some opposition of thumb to fingers in picking up object
- Wrist rotation
- Can voluntarily release some objects
- Can change object from one hand to the other
- Plays with doll or animal toy
- Waves rattle and puts it in his mouth
- Bangs spoon on table repeatedly or pats table
- Can see small objects (see Nine Months)
- Turns head toward source of sound
- Makes some consonant-vowel combinations
- Uses vocalization to denote pleasure or displeasure
- Increased activity at sight of own mirror image
- Recognizes travel preparation
- Discriminates between familiar and strange faces.
- Enjoys "This little pig went to market"

Nine Months:
- Can get from prone to sitting position
- Stands, holding onto the furniture; about a month or so later can pull himself up to standing position
- Creeps or gets about actively in some fashion (may creep backward)
- Held supported under arms, tends to bend forward at hip joints
- Much mouthing activity
- Picks up small objects
- Thumb-finger opposition sufficient to pick up pellet with scissors-like movement
- Interest in throwing
- Fumbles or turns pages of magazine
- Shows some enjoyment of bright pictures
- Utters syllables
- Imitates sounds
- Recognizes own name and may have done so for a month or two
- Knows when conversation concerns him
- Responds to "no, no"
- Displays some jealousy
- May show fear of strangers
- Reacts socially to own mirror image
- Interest in peek-a-boo or pat-a-cake
- Waves bye-bye
- Responds to "How big is baby?"

Twelve Months:
- Walks a few steps, at least with a little help
- Climbs up and down stairs
- Can sit down from standing position, at least by using support
- No longer indulges in much hand-mouth or other mouthing activity
- Holds own cup to drink from
- Picks up pellet with overhand pincer-like movement and may carry pellet to mouth
- Shows preference for use of right or left hand
- Can make scribbling marks with a crayon
- Imitates actions of others occasionally

Table XIII—Cont.

BEHAVIOR CHARACTERISTIC OF CERTAIN AGE LEVELS IN INFANCY

- Can make funny faces
- Inhibits simple familiar action on command
- Coöperates in dressing, more particularly in undressing
- Says two or more words
- Knows his own name

Eighteen Months:

- Walking requires little attention
- Can carry an object while walking
- Can pull wheeled toy
- Can walk up stairs with help (see Two Years)
- Comes down stairs backward in creeping position or sits down and bumps himself forward from one step to the next (see Two Years)
- Can jig or dance
- Turns pages of a book, several pages together
- Shows interest in color
- Points to such pictures as dog, car, clock
- Can name a few objects in pictures
- Scribbles spontaneously
- Can build a tower of three or more one-inch cubes (see Two Years)
- Can use spoon and cup well
- Can take off own shoes and stockings with help
- Holds glass with both hands
- Points to nose, eyes, hair, et cetera

Two Years:

- Runs
- Can walk up and kick a ball
- Can walk up and down stairs alone even if he does use both feet to a step
- Turns pages of book singly
- Has a vocabulary of 200-300 words; maybe as many as 1,000
- Combines words into short sentences
- Uses some pronouns
- Recounts his experiences to others
- Vocalizes toilet needs; asks for food or drink
- Names common objects in pictures
- Obeys simple commands
- Identifies self in mirror
- Imitates actions of other children at play
- Can build a tower of six or more blocks

Intelligence Testing in Infancy

The use of developmental norms naturally raises the question of tests for infants. One example of the desirability of infant tests occurs in connection with adoption. Many prospective adoptive parents would prefer to adopt a very young infant in order to have the pleasure of watching and attending to a baby as well as to begin habit-training very early. The question, therefore, arises as to whether such parents can be given sufficiently accurate, predictive test results to enable them to make a wise selection. The answer to this question is far from simple. As one example of the difficulties involved, compare the nine-months-old baby who has been cared for in a private home and has had considerable individual attention with the nine-months-old who has spent all his life in an institution. The latter child may, perhaps, have been bathed, dressed, fed, cared for when sick, but otherwise left alone in his bed or pen. Now certainly vocalization, hand coördination, and social reactions may be different in these two children because of both nature *and* nurture. It is very difficult, of course, for clinicians to know exactly how much allowance to make in such cases for environmental deprivation. Or take the matter of two-year-olds. Some institutions for babies have an age limit at two years. When these babies are ready to leave the institution at age two, they almost invariably are talking either not at all or very little as compared with other two-year-olds who have been encouraged to talk in private family life. The institution children, be it noted, often suddenly break forth into relatively advanced speech after a short time in a family situation. They may have been ready—over-ready—and may merely have been awaiting the proper stimulus and copy for imitation. Test results on a two-year-old who has spent his life in an institution simply cannot be measured against a scale appropriate for a normally reared two-year-old. Test results are much more accurate and more usable when secured from babies from normal homes than from institution children or from children who have frequently been changed from one home to another.

One of the first ways in which intellectual life demonstrates itself is through acquisition of bodily control. For various reasons which we need not discuss in detail here, physical development and motor control are somewhat inadequate tests of so-called mental life. Tests made on infants, therefore, do not give us as accurate a basis for prediction of subsequent intellectual development as we should like. As shown by several studies, the correlations between test results on babies and test results on the same children when they are old enough for the use of standardized intelligence tests are not nearly so high as is desirable in statistical work. We shall have more to say about this matter in our discussion of intelligence tests as such. In that connection we shall also mention some of the tests for infants. By way of summary, for the present, we might say that Bayley (17) and Shirley (108) particularly stress the unevenness in development in the early stages of a child's life. This unevenness causes inconsistencies in test results from one test to another. This would appear to be true for the first year and a half, if not indeed for the first two or three years. Shirley (108) says[8]:

> Inconsistencies in first-year development may be attributed to the great speed of development, to the catching-up of premature babies and the slowing down of postmature babies in developmental rate, and to the difficulties of motivating babies and of reducing unfavorable personality traits to a minimum. Finally, it is suggested that it is impossible for the baby to settle down to a consistent rate of development until a sufficient number of traits have emerged to serve as a foundation for future skills.

An experienced clinician who has had practice with babies will usually, however, be able to tell enough, within a certain range of error, to answer the questions of prospective adoptive parents. Needless to say, the judgment becomes increasingly accurate as the baby grows older and as he is observed more often by the psychologist. Usually the extremes of defectiveness and brilliance can be determined. That is to say, tests and observation periods will usually reveal the fact, if a baby is considerably retarded or if he is considerably advanced for his age. *Within* these two fields as well as within the field of average development, not a great deal of discrimination can as yet be made for predictive purposes (5, 14, 30, 45, 52, 54, 62, 78, 80, 109).

Stimulation and Development

Infancy offers another question which may not give the client mother much concern but is of importance nevertheless, and that is the matter of the amount of stimulation which arouses the child to its own best efforts and the amount which tires, overstimulates, and wears out. The problem easily spreads out into the correlated question as to whether we can increase a child's mental capacity by providing sensory and motor opportunities. Interestingly enough, studies along this line have been made recently which leave us somewhat in doubt as to what the answer is. Dr. Myrtle McGraw (77) took twin boys at the age of twenty days. She had them 7 or 8 hours a day, 5 days a week, until they were nearly 2 years old. One twin was cared for physically but otherwise was left entirely to his own devices except that he had 2 toys with which to amuse himself. At the same time, the other twin was given unlimited opportunity for practice in climbing, swimming, diving, getting on and off stools and incline planes, jumping, and roller skating. The skills acquired by the latter twin were most unusual for one of his age, to say the least. Dr. McGraw concludes, however, that in those activities necessary for normal development—such phylogenetic skills as reflexes, suspension-grasp, creeping, posture, reaching reactions, and the like—practice had little effect. That is to say, the untrained twin seemed to mature into or acquire *these skills* for himself without help. In the *accessory skills,* such as roller skating, practice and opportunity appeared to be absolutely essential. When the twins were 22 months old, the *control twin* was taken for a period of two and one-half months of intensive training. At the end of this time, he was still quite inferior to the originally practiced twin. He had in the meantime, Dr. McGraw thinks, developed certain attitudes and emotional traits which interfered with his learning the tricks that his skilled brother had already learned. One wonders how much of an inferiority complex was engendered in his own home, too, by comparison with his acrobatic brother. A later report (79) on these two children appeared in 1939.

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[8] From Mary M. Shirley, *The First Two Years*, by permission of University of Minnesota Press, Minneapolis, Minn.

The other study, by Dennis (37), raises some interesting points of contrast with the McGraw study. Dr. Dennis took a pair of fraternal twins and placed them under environmental restriction for the first months of their lives. They were given no toys and were not allowed to attempt standing or sitting. Reaching, grasping, sitting alone, and standing with help were, therefore, retarded quite beyond the normal time for appearance. Each skill was easily established when opportunity was finally given to the children. Dr. Dennis concludes that the retardations could have been caused only by the restrictions on exercise. Curiously enough, while conditions were not quite the same, these are essentially the skills which Dr. McGraw concludes are *not* subject to stimulation from environment. A review of other experiments in this field may be found in reference 52.

Now, neither of these two studies must be confused with a more practical matter faced by mothers. The mother often asks: "Shall I let the baby stand on his feet? He tries to, and I can't keep him down. Isn't he too young?" We shall leave out of consideration children showing rickets or other illnesses. These cases must be directed by medical men. For the well child, on the other hand, there is probably little danger that the child himself will initiate more activity than his own body is ready to take care of adequately. Holt (57) feels that a child should not be prevented from walking when he wants to do so, but also that he should not be continually pressed into the activity when he shows no inclination for it. He feels, further, that "nothing short of mechanical restraint" will keep a healthy child from standing or walking when he is strong enough to do so. Shirley (106) says[9]:

> It is safe to say that the babies never spontaneously try anything that they are not perfectly competent to do. . . . The statement that a baby will not overtax his strength does not rule out the possibility of his being overstimulated to activity.

The balance between optimum environmental opportunity on the one hand and nerve-wrecking overstimulation on the other hand constitutes one of the evidences of finesse in child-rearing.

One of the most conspicuous changes of the last few years in regard to the care of infants has been in connection with the matter of clothing. The amount and weight of clothing has decreased materially. Only such amounts as are actually needed for protection are recommended by pediatrists today. In addition to selecting clothing by the criterion of adequate protection, one should choose those clothes which require least handling of the baby, those which permit greatest freedom of movement for the baby, those which are most easily laundered, those which can be used over a period of considerable growth, and those most comfortable for the baby. Who does not remember the old-fashioned long dresses from which babies were "shortened" at about six months of age? Contrast with those styles the "telescoping" layettes (102) in use now, in which all garments open down the front and fit one into another so that the baby can be laid right into the telescoped open garments, which can then be buttoned or tied without turning the baby over. We shall have more to say about clothes in connection with the care of preschool children in a later chapter.

One other point in regard to clothes may be mentioned at this time—the dressing of twins. Sometimes for the sake of convenience or economy, it seems wise for a time, at least, to dress twins alike. Probably no harm can come of that, providing the custom does not become a fetish. As a child grows, clothes not only *reflect* his personality but they actually do much to *shape* his personality. Clothes, then, should never be allowed to dwarf or overshadow individuality. That twins happen to be born at the same time may be hardship enough in many ways; they should not have to face the additional hardship of losing their personalities. When, and if, dressing twins alike results in making two personalities into one, it is bad in the extreme.

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[9] From Mary M. Shirley, *The First Two Years*, by permission of University of Minnesota Press, Minneapolis, Minn.

Illness in Infancy

Although this is not the place to discuss in detail the illnesses of babies, it is well to call attention to a few facts with which social workers should be familiar. Normally a baby's skin is cool and moist. If it becomes dry and warm and if the baby shows any acceleration of temperature whatsoever, the doctor should be summoned. A baby's temperature is usually taken with a rectal thermometer rather than by the mouth. Mothers are sometimes greatly embarrassed by the fact that when they call the doctor the baby seems quite ill, whereas by the time the doctor arrives the baby appears normal. This is a very common occurrence and need cause no embarrassment. It should be remembered that babies and small children have had little experience, as a rule, with sickness and therefore have little *remembrance* or *anticipation* of pain. For this reason and for others, symptoms appear to change very rapidly in young children. This is more, rather than less, reason why any marked symptom should be noted and medical advice sought immediately.

Sometimes watching a baby's movements will tell a close observer much as to the cause of the baby's suffering. A baby who draws his legs up is likely to be suffering from pains in the abdomen. If he holds any part of his body very still, it may be that the pain is in that part. If he turns his head to one side constantly or pulls at his ear, he may be having earache which he cannot tell us about. Fever; unusual restlessness or unusual drowsiness; sudden and unusual vomiting; refusal to take food; diarrhea; rapid breathing; discharge from eyes, nose, or ears; hoarseness; coughing; rashes; or convulsions all indicate conditions that demand immediate medical attention (1, 35, 57, 58, 102).

Infant Placing

The social worker is constantly faced with problems of infant placing. Placing of babies is often a difficult matter. Many adults who can understand older children sufficiently to provide them with good substitute home care feel utterly helpless and even afraid in the presence of a little baby. For this reason, unfortunately, it sometimes seems easier to find a substitute home for young babies in institutions than in private foster homes. In the latter part of the nineteenth century, it was discovered that of 366 motherless infants who were placed for institutional care on Randall's Island, N. Y., only 12 were still living a year later. In other words, there had been an infant mortality of 96.7 per cent. Further study showed that foundlings who were taken there under six months of age had a very small chance of surviving. Subsequent studies have tended to corroborate the suspicions aroused at that time; namely, that infants require a personal kind of individual care rather than mass care (8, 9, 27, 61, 95, 96). Of course, emergencies oftentimes make temporary hospital care necessary, but for the ordinary welfare of babies the handling, fondling, and attention offered by a private home is infinitely preferable to institutional care. From the standpoint of *mental hygiene,* institutional placement may be just as bad for older children as for babies or, indeed, even worse. From the standpoint of the *physical safeguards* of infancy, the hazards of institutions are probably greater for the younger child.

The Infant and His Family

While the general question of family relationships will be considered in a later chapter, there are a few matters pertaining to infancy that may well be considered here. The entrance of a baby into a family is bound to make a great many differences in routine and to bring about many changes. Dr. Sherbon (102) refers to a study made on the amount of time required for the care of children under one year of age. The average daily time spent in the care of these babies was five hours and twenty minutes. Where all this care is provided by the mother alone, it is small wonder that she may find herself with little time left for other members of the family. All too frequently, in the case of first babies particularly, this sudden shift of interest on the part of the wife is something of a puzzle to the husband. Often it is hard for him to understand the actual physical weariness that attends the bathing, laundry work, bottle sterilizing, preparation of formulae, and other details. The wife, on the other hand, is equally surprised and disappointed that her husband seems none too enthusiastic over the gain of an ounce in weight or the details of formula preparation. Strained relations between husband and wife may result. The wife is too tired to attend to her own personal appearance. The husband cannot be bothered with all the details of baby care; he knows nothing about it and may even be more or less afraid of it. In fact, many husbands really feel and show little affection for young babies. This does not necessarily mean that these same men may not make devoted fathers when their offspring have matured enough to be handled, played with, or showed off. From the standpoint of family mental hygiene, it is most important that the baby be made to take his proper place in the household regimen, neither demanding nor receiving too much attention. The mother, for her part, must not be selfish in her interest in the new baby, thereby neglecting other equally important family relationships. The husband, for his part, can often do much to relieve the wife of some of the extra duties imposed upon her by the coming of the baby and will, as a rule, develop thereby a tender affection for the baby. Otherwise, he may not experience this affection until the baby grows older.

Infant Records

In view of the enormous amount of care and attention that mothers usually bestow upon their children, it seems strange that many of them forget so many of the details of their child's infancy. When psychologists attempt to get developmental data from mothers regarding their children, they find an amazing amount of forgetfulness and inaccuracy (83). In many of the cases that social workers encounter, the mother's feeble-mindedness accounts for her ignorance of these items. The writer recently was working with a very feeble-minded mother who did not know her own age or birthday. She said she thought she was 24, and she thought she was born in 1900. She thought the baby's birthday was October 16, 1922, when in reality it was October 23, 1932. She had the baby with her, but, when asked how many teeth the baby had, she said she did not know. When asked which teeth he had cut first, she pointed to the right upper back teeth. When questioned further on this point, she changed her mind and declared that it was the left upper back teeth he had cut first. And in a few years this mother will be expected to help her child with his "homework" in arithmetic!

A study was made by Pyles, Stoltz, and MacFarland (93) on 252 children from a superior urban community where records were available for the children at birth, at the end of the first year, and at 21 months of age. The reports of the mothers of these babies, as compared with the actual records, showed a slight but general tendency for them to forget some of their own disturbances during pregnancy, some of the illnesses of their children, and even injuries and the use of instruments at the birth of the child. On the other hand, they displayed a tendency to remember dates for walking, talking, and teething as being earlier than they really had occurred. Anyone who has done clinical work and has had experience in history-taking must often wonder, as the writer does, whether many of the ages reported for these developmental items on defective children are not similarly and unintentionally wrongly reported. One wonders how often mothers remember these dates as they *wish they had been* or as they *usually are.* It may be, if we knew how much allowance to make for such distortions, that the retardation of defective children in walking, talking, and teething would prove to be even greater than we now believe it to be. Incidentally, did anyone ever know a mother who kept a baby book for any but the first child?

The baby book by Anderson and Goodenough (7) is to be recommended because it provides space for records and pictures for 16 years of the child's life, as well as norms of development.

Routine for Infants

Probably the one thing that disturbs the visiting nurse or the social worker most as she passes from one house to another and sees infants cared for with varying degrees of intelligence is the lack of regular routine and the failure to provide serenity and quiet for babies. In the type of home found among clients, these two vices are probably most frequent. How much neurotic illness in future generations will thus be produced, it is hard to say. It is scarcely answering the question to say that our grandmothers rocked us to sleep and that even our mothers knew nothing of some modern principles of infant feeding. For the sake of *adequate growth* and *disease prevention,* proper feeding is, of course, necessary for babies. For the sake of *desirable emotional and nervous development,* certain conditions are essential. These include security of routine, long periods when the baby is left entirely alone, parental affection tempered with adult self-control, as well as sensible periods of frolic and shared family relationships. Who shall say which of these factors is most important?

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Chapter V

THE PRESCHOOL CHILD

Rise of Emphasis on Preschool Education

One might very well ask why recent interest has focused so largely on the preschool child. To answer that question definitively, to state all the contributing factors, or to date the exact beginnings of this interest is just as impossible as to undertake the same task for the Industrial Revolution, the Civil War, or Communism. One can, however, mention a few factors which played a part in the segregation of preschool children for study and research. We cannot stop long on the unpleasant theological ideas of Comenius (1592-1670) who believed that childhood is innately depraved. He elaborated doctrines for the training of very young children by their parents. The theories of John Locke (1632-1704), Pestalozzi (1734-1805), Rousseau (1712-1778), Oberlin (1740-1826), and Froebel (1782-1852) are of interest to students of education and sociology. Space does not permit an examination of these theories at this point even though the philosophy of education for early childhood has largely developed from this theoretical background that they supplied. Another contributor was showman P. T. Barnum, who, in 1842, had the first Baby Show. This may have provided the idea which, in later years, developed into Well-Baby Clinics.

Robert Owen, a pioneer in European thinking, is of particular interest in the United States. During the Industrial Revolution, he, as a cotton-mill owner in Scotland, became concerned over the welfare of industrial workers. In addition to underpaid adult laborers, there were hundreds of small children who worked as much as 12 hours a day in factories. Other very young children were left at home alone while older members of the family were employed. In 1816, Owen opened an infant school for these children. Later he came to America and bought out the entire Rappite Village of Harmony, Indiana. He wished to try a social experiment, one feature of which was a nursery school, which he opened about 1826. More than 100 children were enrolled. Such a procedure is quite different from that of the best nursery schools of today, which usually limit their enrollment to

20 or fewer. This experiment left no lineal descendants in either the social or the educational world.

More recent social phenomena have had more direct and intimate connection with the current interest in the early years of life. Perhaps one of the most influential of these factors was the realization of the necessity for improving health conditions. Early experiences during World War I in European countries, and later in America, showed that a large part of the draft population was handicapped by physical conditions that could have been prevented or corrected had attention been given to them in childhood. During the early 1920's, many studies were therefore made of the health of those who were then of preschool age. Results were distressing in the extreme. Details of the findings may be read in reference 77 at the end of this chapter. Health measures were instituted throughout the country, and baby clinics were opened in many places. These health centers offered educational and counseling service for parents.

At about the same time—indeed, even before—another factor had arisen which called to our attention the necessity of providing health and educational facilities for young children. Both in the United States and abroad, mothers were leaving home to work in industry. Day nurseries (77, 98) had been operating in this country since the time of the Civil War, when they were opened for the children of women needed in some of the auxiliary war services. The day nurseries were largely fashioned after the French *crèche,* which has no doubt served also as the model for the more recent Russian *crèche.*

Day nurseries developed rapidly in our country, some good and some bad. At any rate, their intention was to provide physical shelter, at least, for the children of working mothers. The social fallacy of separating young children from their mothers was largely overlooked. Mangold (71) says:

> When Rabbi Hirsch at the White House Conference of 1909 declared that the public should pay needy mothers so that they could care for their own children in their own homes, the sophisticated child welfare workers of the country glanced furtively at each other and smiled superciliously.

However, two years later the first state mothers' pension law was passed by Illinois.

At about the same time, other forces were joining in an effort to improve educational, social, and psychological environments of children. In 1921, the Commonwealth Fund in New York instituted a five-year study and demonstration for the prevention of delinquency.

This program included the services of the New York School of Social Work, the National Committee for Mental Hygiene, the National Committee of Visiting Teachers, and the Joint Committee (made up of executive heads of all the participating agencies). Visiting teachers and child-guidance clinics for five years conducted demonstrations in many neighborhoods throughout the country. Most of these communities took on local responsibility for continuing the services after the demonstration period was over. Obviously, this program in all of its branches rendered a great service to the fields of preschool and parent education.

In understanding the rise of the preschool emphasis, we should also recall that in the last decade of the nineteenth and the first and second decades of the twentieth century educational doctrines took on a new philosophy. The influence of John Dewey as well as the earlier work of G. Stanley Hall was in the direction of regarding the child, even the little child, as a self-motivating, inwardly dominated, and powerfully active *individual.* The twentieth century, in educational literature, is often referred to as the *Century of the Child.* The vocabulary of this period includes such terms as the child-centered school, the project method, pre-parental training, self-activity, progressive education, and mental hygiene. The child had begun to come into his own and to bring his little brother and sister with him! Not only that, he had begun to bring his parents to school (5)!

Two more recent developments in the care of young children must be mentioned. During the 1930's, migrant workers, particularly in the fruit-raising areas of the West, attracted the attention of the public. These families were lured from one district to another as fruit and other agricultural crops were to be harvested. Usually the entire family moved, taking most of the family belongings with them. Residence in any one locality was likely to be of relatively short duration. The children were either not in school at all or else were moved every few weeks from one school to another. Care and schooling for these children, while their parents were away working, was arranged for in many places—sometimes by local citizens, sometimes by the migrants themselves, sometimes by the employers, and in some cases by the government. Reports from districts where such care was provided indicate that efficiency differed from one locality to another. However, in all cases some organized care was probably better than no care.

After the entry of the United States into World War II, the problem of child care was again brought into the limelight. In large numbers of cases, both parents worked in defense plants, often on different shifts. In other cases, the father was in military service and the mother was employed. Lurid magazine articles about the neglect of children under these conditions told of children locked in automobiles for safekeeping or roaming the streets with the door key tied around their necks. Many of these children were never reached by any of the educational, social, and governmental facilities set up to remedy such conditions. In many districts around army camps and defense plants, day-care centers were opened where children could be cared for while their parents were away from home. Such breakdown of family life and home care for children is, of course, one of the strong arguments against war and constitutes a very potent reason for an enduring peace (76).

Kindergarten and Nursery School

Because it is sometimes difficult to appreciate the history and program of contemporary events, it may be well to consider for a time our present kindergarten and nursery school. Kindergartens, unlike day nurseries, have always been *educational* in aim, even though many of them were of private or philanthropic origin. The influence of Froebel and of Montessori is well known. Suffice it to say that the first kindergarten in the United States for English-speaking children was opened about 1860, although there had been some German-American kindergartens prior to that time (75, 77).

We need not stop at this point to go into the question of kindergarten doctrines and philosophy. However, it must be admitted that in this country for many years kindergartens were very highly routinized and regimented. The principles of Froebel probably went Froebel one better in the hands of some rigid kindergartners. Within the present century, however, kindergartens in many places have taken a right-about-face and now operate largely on a self-activity program. Needless to say, this change of procedure and philosophy has not come about without much discussion, debate, and figurative bloodshed.

Most cities now include kindergartens as an integral part of the public school system. However, even in such cities, kindergartens do not operate in *all* the public schools. Furthermore, it must be remembered that the benefits of both kindergarten and nursery school education are limited almost entirely to children living in cities or towns. Perhaps one can console himself somewhat by saying that such education is more needed in urban centers. Julia Wade Abbott once said, "The public school kindergartner was the first visiting teacher." Certain it is that the kindergarten has been a veritable godsend to the foreign child and his mother in our crowded cities.

The now famous Fisher Act of 1918 in England provided, among other educational facilities, for nursery schools throughout the whole of England "to lay the foundations of health, habit, and responsive personality." The nursery school movement developed rapidly both in England and in the United States. While originally the nursery schools were not opened as philanthropic ventures, as were many of the early infant schools and kindergartens, and all the day nurseries, yet during the economic depression in the third decade of the century, many nursery schools were opened in the United States with federal funds. In some instances, the philanthropy consisted largely in providing a training program and subsequent employment for nursery school teachers.

Nursery schools tend to enroll children from about two to four years of age. The average nursery school is likely to have a majority of its children around three to three and one-half years old. The commonest age range in kindergartens is four to six years.

There are differences other than age range between the typical kindergarten and the typical nursery school (66). The kindergarten program may be said to be somewhat more formal and slightly more *educational* than that of the nursery school. It usually includes rhythm, play, and construction—partly, at least, with materials requiring smaller and finer coördinations than nursery school equipment. In general, the educational aim of the *progressive kindergarten* of today is not essentially different from that of the nursery school except for those differences imposed by the dissimilar age range.

The kindergarten program usually provides for only half-day sessions. In many cities where facilities are limited, the five-year-olds attend a morning session and the four-year-olds, an afternoon session (48).

Many nursery schools provide an all-day program. This means that health, rest, and eating are as much a part of the nursery school plan as are the play activities, rhythm, or art work. The child is examined by a nurse or physician as soon as he arrives in the morning. If he shows no evidence of communicable disease, he is allowed to go to the play yard. During the first part of the morning, the give-and-take of play activities is watched over and directed, when necessary, by one teacher or assistant for every six to eight or ten children. In the middle of the morning, the child helps himself to his codliver oil, fruit juice, or whatever is provided for him at that time. Following this, he may have a rest period or, in some nursery schools, a time of very quiet play or music until the midday meal. At this meal, the child is taught to help serve himself. Feeding problems have a way of disappearing after a child has been in a nursery school group with a mild-mannered and professionally trained nursery school teacher. After the noon meal, all children retire to individual sleeping cots or floor blankets to sleep. Here again, it is gratifying to notice how easily proper habits can be instilled into children by a person trained in such matters. Usually parents come for their children toward the middle of the afternoon.

One often hears the question raised as to the wisdom of "school" for children as young as eighteen months, two, or even three years. Certainly, compulsory education laws should not be pushed down into this age area. Where little children have opportunities for social contacts with other children in their own home or neighborhood; where parents are well equipped to undertake the emotional, social, and physical rearing of young children; where ample space and time are provided for safe outdoor play; where the child is gradually weaning himself from his parents; or where a nursery school is so far distant that traveling to and from it involves physical strain—there perhaps no great harm will come from the omission of nursery school training. On the other hand, it can be safely said that, at the hands of a skillful nursery school teacher, mental hygiene of little children can be better directed than is the case in the average home. As an example of the opportunities provided by a nursery school, one might mention the large sheets of paper, paintpots, easels, or oilcloth-covered tables where little children can finger-paint or brush-paint to their hearts' content without there being any necessity for caution or nagging. It is well-nigh impossible for the average home to provide for such wholesome, but adult-disturbing painting experiments, or for other similar creative activities.

The example of other children who eat well or sleep well, or who are "learning to take turns" also provides a powerful stimulus toward right conduct. Self-help is encouraged in nursery schools more than is usual in the average home.

One cannot overlook the fact that entrance into nursery school, like all great adventures in life, demands *some* adjustment. Mothers occasionally report that the first days in nursery school are highly stimulating and make for excitability. This is probably true in relatively few cases and does not persist long.

Another question rises in the mind of one who watches little children for their first few days or weeks in a nursery school. Individual differences are very marked in respect to children's willingness to leave mother and enter into this new world. Some children protest not at all, some for only a day or so, some for much longer time. Except in the rare case, the child does learn to accept the separation after a time. Nursery school authorities have been prone to argue that if a child finally does allow his mother to leave without his protesting too much, such a child has "learned" to do without his mother for a time, at least. It would appear that the matter is not quite so simple as that. In the old days, for example, many children finally did learn to read after some fashion who, we now believe, did not have "reading readiness" and who would much better not have been exposed to reading for several months, when they would have made much more satisfactory progress with less emotional expenditure. The thought then occurs to us that perhaps some children are not yet "ready" to learn to do without mother and might learn this skill more readily a little later. Certainly there is accumulating evidence that separation from the nursing process in infancy is fraught with emotional and personality hazards for the child who is not matured sufficiently to accept such a situation. By the same token, separation from mother at age two or three must be under such conditions, at least, that fear wanes rather than increases and emotional security becomes stronger and not weaker.

One other possibility must be questioned. Is a child ever thrown into turmoil by a conflict between home and nursery school procedure? This is more than a theoretical possibility. A skillful nursery school teacher often senses such situations and has to resort to very subtle methods of parent education.

Perhaps one of the chief advantages of nursery schools is the training they provide for parents. Most nursery schools accept children for enrollment only with the understanding that the parents will keep certain records, will attend conferences and consultation periods concerning their child, and perhaps attend group meetings of parents.

Many nursery schools are equipped with a "one-way vision screen." These screens are made of specially treated finely meshed wire or, in some recent experiments, black cellophane, or specially treated glass. They are an excellent adjunct for parent education. The parent who sits back of this screen can see his or her child in action without the child's knowing that he is being observed. Many a parent has thus seen his child in relation to, and in comparison with, other children as he could never do otherwise. The writer distinctly remembers the case of little John. John's parents had exploited him in the city newspapers for months by the time he was two years of age. It was claimed that he could read two or three hundred words and that he surely must be a genius. A psychologist was inveigled into attempting to administer an intelligence test to the child, much against her own better judgment. All efforts to take the child into the examining room without his parents resulted in tears and temper tantrums. Once in the examining room, the parents continued their stream of admonitions and prohibitions to the child. The usual form-boards, pegboards, color sorting, and other "preschool tests" were attempted. John could do none of them. In fact, there was nothing that was tried, appropriate for his age, that he could do. All the while, he was demanding constant attention from both parents. After half an hour of witnessing failure by their "genius" son, the parents insisted that he be allowed to give a demonstration of his "reading." Sure enough, he could read off some two hundred or more separate words from flash cards held by his parents. It was evident that he did not know the meaning of some of the words which he recognized on sight, but he "read" them, nevertheless. The parents were finally persuaded—for a short time, at least—that what their child needed was social training rather than training in reading. He was accordingly enrolled in a nearby nursery school. The one-way vision screen enabled the parents to watch John in his contacts with other children. Perhaps one should say his *absence of contacts* because, whereas all the other children participated in small-group activities, John could not be prevailed upon to do anything with anyone else. When other children carried their own food to the table, he could not or would not carry his. When other children, with help, learned to "unfold the blanket," then to "turn it down," and to "tuck the corners under," in making their own beds, John was helpless. The sight through the one-way vision screen day after day was not pleasant to the parents. The realization of their son's social incompetence, his wretched mental hygiene, his helplessness in eating, dressing, and toileting were brought into bold relief. All the while, they were insisting that the nursery school should allow John to go on with his reading. Incidentally, the mental hygiene of the *parents* was so bad that the unpleasant discoveries about their child were too much for them. In popular parlance, they "could not take it," and they withdrew John from the school. Recent items in the newspapers have brought this case up to date. John is now performing, at about age 12 or 14, on the concert stage and has attracted considerable favorable notice from the critics. It is certainly to be hoped that the parents are not merely fostering another achievement for their own gratification. It is evident, of course, that the child has certain abilities in large measure. It is perhaps also evident that neglect of social, emotional, and other mental-hygiene principles in the case of brilliant children has tended to give gifted children, as a class, an undeservedly bad name. The real all-around "education" that children receive in well-staffed nursery schools and kindergartens is one of the best safeguards for good mental hygiene in childhood.

Preschool Attendance and Later Development

One often hears the question raised as to whether kindergarten—or, more recently, nursery school—does anything more for a child than to keep him happily employed for the time being or to develop certain skills appropriate for his age. Kindergarten and elementary-school teachers have been interested in this question for many years (38, 54, 70, 81, 85). They have wondered, for example, whether children with kindergarten education progress any more rapidly through the elementary schools than do non-kindergarten-trained children. There are difficulties in the way of getting a reliable answer to this question. For example, are children who are sent to kindergarten selected from a different social and intellectual stratum than children who are not sent to kindergarten? As public nursery schools and kindergartens become more common, it will be easier to eliminate this statistical knot. Only two of the numerous studies of this question will be mentioned here, but from their bibliographies, one can discover citations of many others.

Goetch (38) compared the progress in Grades I through VI of 968 kindergarten-trained children with that of 968 non-kindergarten-trained children. He reports that much public-school time was saved for the former group, since they entered Grade I younger and progressed through the grades more rapidly. At the end of Grade VI, Goetch's kindergarten group was, on the average, more than four months younger than the non-kindergarten group. Their general scholastic average, as well as their social ratings, was higher. One wonders about these findings when it is discovered that the *intelligence test ratings* of the kindergarten-trained group were *also* higher. Goetch, however, does say that the kindergarten-trained children made higher achievement scores than the non-kindergarten-trained children *of the same mental age.*

MacLatchy's study (70) of more than 2,300 kindergarten-trained children compared with over 2,500 non-kindergarten-trained children shows that the former group received higher ratings on industry, initiative, and oral language. They also did better on an intelligence test. Their achievement in reading was much superior to that of the children who had not gone to kindergarten. Other research studies have, for the most part, been in agreement with the findings here mentioned. Claims are also made for the superiority of kindergarten-trained children in respect to social maturity.

Studies on nursery-school-trained children, including their later school progress, are appearing in various publications (4, 32, 46, 54, 61, 77, 91). As yet, there is need for more investigation in this field. Some of our first nursery school children are now well along in the grades. Studies will be made of these children, no doubt with a view to determining the effect of previous nursery school training. Jersild and Fite (54) have already reported that at the beginning of the year in kindergarten those children who had had nursery school experience the previous year tended to have more social contacts with other children than the kindergarten children who had not previously attended nursery school. This advantage in favor of the nursery-school-trained children tended to disappear before the kindergarten year was over, however.

Two other research questions have received considerable attention within recent years. One is the question as to whether attendance at nursery school raises the child's intelligence quotient. Page (78), as well as various authors in the 1940 Yearbook of the National Society for the Study of Education, concludes that nursery school attendance does not raise the intelligence quotient.

Another matter of interest is the possibility of emotional training and therapy through the nursery school. Those who have watched individual children in good nursery schools can attest to the fact that temper tantrums often become less frequent, sharing comes to be more frequent and more enjoyable, and self-help more proficient. No one knows as yet, perhaps, what the final verdict will be as to the possibility of reducing mental disease and emotional maladjustment through the facilities of the nursery school and kindergarten. Some of these schools are working in close contact with child guidance centers with a view to obtaining as much therapy as possible. Day-by-day diary records of the individual child's behavior are being used in progressive schools and are telling their story about the child's development. Those interested in reading further on the therapeutic value of early education may be interested in reading Baruch (5), Benjamin (10), Bowley (16), Chittenden (24), Gerard (36), Headley and

Foster (48), Lerner and Murphy (67), Lippman (69), Read and Conrad (83), Thompson (97), and Washburn (105).

There is a practical question in regard to placing a very bright child in kindergarten at the age normal for such placement. The writer has known several very superior children who spent about a year in kindergarten and had at the end of that time mastered all the techniques. They had also matured socially and emotionally to the point that kindergarten was obviously no longer the place for them. They were still too young to be admitted to the first grade. In several such cases, the child actually had to be kept home from school for a year or so. This break in school life is rather disconcerting to a bright child and presents a real problem. Obviously, it is a little hard to anticipate, in advance of his being admitted, that the child will "outgrow" kindergarten. Of course, where it is possible to enter the child in a progressive school having both kindergarten and first grade, the difficulty is minimized, since grade lines in such schools can easily be cut across. Otherwise, the best thing may be to keep the child at home until it is more nearly time for entrance into the elementary school, before allowing him to go to kindergarten. In the meantime, of course, provision must be made for plenty of play with other children and for constructive activities of many kinds.

The "Illusion of the Definite Period"

The point has been stressed continuously throughout this book that the personality and even the habits of an individual do not have sharply differentiated time intervals. Therefore, the discussion of the formation of such habits as toilet, washing and dressing, eating, sleeping, and the like is reserved for the next chapter. Does such a discussion logically belong to a consideration of the preschool period any more than to any other period in life? Even though habit training in such matters *begins* in the early years, does it not require supervision throughout the entire period of childhood and adolescence? The answer to the latter question is certainly an affirmative one. Psychology has taught us to question the absolute fixity and permanence of anything that we regard as a "habit" in a child. If this were not true, the task of child-rearing would be much easier in many respects—and much harder in others.

Obviously, many other topics might be considered while one is thinking about the preschool period. The mental hygienists speak of this age as the "golden age of mental hygiene," and it is certain that most of the nervous disorders and unhappinesses of later life have their beginnings in early childhood. Many habits and attitudes, for good or ill, are established so early in life that adults forget their source and origin. There is always danger, however, in the "illusion of the definite period." For this reason, it may be better to stop the discussion of the preschool child as such.

The period of life once called the "neglected age of childhood" now threatens to usurp the center of the stage and to push the later periods of childhood into oblivion. In fact, as one looks over current psychological literature, one wonders what has become of the old-fashioned *school-age child.* There are plenty of references to him as he functions *in school* with his reading, subtraction, long division, or the social sciences. One can find plenty of research about him as an academic learner. Other phases of the life of the six- to twelve- or fourteen-year-old, however, appear to be sadly neglected so far as scientific research is concerned. One wishes the books and periodicals could give us more help with the ten-year-old who does not want to go to school; the twelve-year-old who thinks everything in his chum's home is right and everything in his own home is wrong; the child with musical ability who will not practice; the child who *appears* to be lazy; the child who is selfish and thoughtless in his home; the child who always seems to prefer playmates from a social class other than that to which his family belongs; the child whom nobody likes. All these are living human beings about whom not enough is being written or done. In the meantime, the preschool child goes merrily on in the focus of many a laboratory microscope, so to speak, and furnishes material for endless research projects, master's theses, and innumerable articles and books.

Negativism and Temper Tantrums

Unkind as it may seem to say so, negativism and temper tantrums do seem to be peculiarly characteristic of the preschool-age child. For this reason, they will be considered at this point, whereas some other behaviors and habits that belong equally to older children will be discussed in a subsequent chapter. Negativistic behavior has been the subject of much research (10, 22, 23, 31, 55, 72, 84, 92, 94, 95). The negativistic child is unwilling to do what is asked of him. In fact, at times he deliberately does the opposite. Some families make the mistake of trying to meet such situations by giving directions for the contrary of what they really want to have done. A certain amount of negativism in young children is not only to be expected, but is probably wholesome rather than otherwise. As a child's environment widens through the development of walking, talking, running, and playing, it is inevitable that he will, for his own protection, face the necessity of restriction and curbing from adults. It would be a spineless child, indeed, who never showed resentment at such thwartings. The fact must never be overlooked, however, that *much* adult thwarting of children is entirely unnecessary and unjustifiable. When one finds that he has a negativistic child on his hands, it is well to see whether he may not also have an adult-dominated and nagged child on his hands. Part of education, at any age level, however, is to learn the most socialized ways to meet thwartings and dispose of resentment. We must arrange matters so the child learns that, by and large, he attains more self-satisfaction by acceptable behavior than otherwise.

Temper tantrums are extreme forms of negativism. They may include anything in the repertoire of kicking, screaming, stamping feet, throwing things, breaking or scratching furniture, hitting, throwing one's self on the ground, holding the breath, or banging the head on the wall or floor. In analyzing the inception of such a behavior disorder, one must always keep in mind possible physical predisposing factors, such as itching skin conditions, malnutrition, and insufficient sleep. By far the most cases seem to occur in children in whom there are other behavior problems also. These may include fears, feeding problems, thumb-sucking, nail-biting, night terrors, or any of the gamut of personality disorders. Kanner (58) says, however, that in his experience temper tantrums are rarely if ever found in patients showing hypochondriacal symptoms.

Where there are any physical disorders present, they should obviously be eliminated as the first step in treatment. Much more frequently, however, as Sherbon (86) points out, the difficulty involves the fact that we are dealing with a case where "both parent and child are suffering from 'adrenin intoxication.'" Parents of temper-tantrum children are likely to be overprotective, overindulgent, and highly excitable individuals themselves. Rest cures, sedatives, removal from school are never indicated for tantrums *per se*. A survey of the emotional atmosphere in the family regimen is of prime importance. If calmness in meeting the tantrum, coupled with wholesome ignoring of the episode both at the time and afterward, cannot be induced into those responsible for the care of the child, then he may have to be removed from the home. Kanner (58) says, "Display of indifference is a punishment much severer and much more effective than any other disciplinary measure." Only in the case of severe heart involvements is there danger that a child will jeopardize his health in a temper tantrum.

In this connection the breath-holding spells common to infancy and early childhood should be mentioned. Anyone with much experience has seen children hold their breath during crying spells until they became cyanotic or maybe fell unconscious. It has been noted in some of the medical writings (58) that breath-holding frequently has its inception either just before or just after an attack of whooping cough. Breath-holders are also likely to show other evidences of disturbed mental hygiene. Authorities differ as to whether breath-holding *ever* has serious physical outcomes. Holt and McIntosh (49) say:

> Although there are instances on record in which such attacks have terminated fatally, respiration not being renewed, the condition is ordinarily a benign one and need occasion no concern. It must be carefully differentiated from tetany, with which it was long confused.

Kanner (58), on the other hand, says: "The spells involve no danger of any kind. No child has ever died or been injured in a breath-holding spell." Holt and McIntosh (49) permit the old-fashioned remedy of dashing cold water in the face of the breath-holder. All authorities agree, however, that the treatment *par excellence* for breath-holding or head-banging is the establishment of more stability in the child, the removal of emotional disturbances in the family situation, and, as a rule, wholesome ignoring of the episode (10, 24).

Perhaps one other word need be said about negativism in young children. We have already referred to the fact of the discrepancy between the little child's expanding environment and his ability to manipulate this environment with safety to himself or others. For this reason, extreme aggression and negativism are very common in feeble-minded preschool children. Their somatic development calls for vigorous use of arms and legs, but doors won't open, chairs fall over, blocks won't stay on top of each other, and so it goes. The writer has seen many feeble-minded preschool children who were destructive to the point of being almost manic in their behavior.

The same situation but with a different etiology is to be found in the deaf preschool child who has never heard well enough to learn speech. At around three or four years of age the deaf child, if he has normal intelligence, becomes dimly conscious that there are things going on around him in which he cannot participate. The families of such children often comment on the fact that when the family are around the table the deaf child often becomes extremely aggressive in behavior and may throw his food on the floor and show other signs of conflict. A friend of the writer in charge of a residential school for deaf children often says: "Please come to visit our little children any time at all except the first week of school in September. It's like a madhouse then." After these children have been given some control over their environment through the development of communication and the understanding of the language of other people, one large reason for negativism disappears.

Literature on the Preschool Child

It is next to impossible to confine within reasonable limits for such a book as this a bibliography on the preschool child. The references following this and the next chapter have been selected with the idea of giving the social worker, the visiting teacher, and the nurse a bird's-eye view, at least, of some of the available readings in the field of preschool care and training. The list could easily have been made many times as long. However, on occasion, one does need help for the mother who would like to use approved methods of child-rearing in her own home, the mother of the sick child who must legitimately amuse him at home (45), or the group of children who would enjoy singing or painting or constructing (18, 19). Help on clothes, toys, amusements, and many other topics may be found in the bibliography as well as in the cumulative index of such periodicals as the *Parents' Magazine, Childhood Education, Child Study, Child Welfare;* and *Journal of Home Economics.*

A survey of our bibliography will no doubt suggest help on somewhat vague and unarticulated questions that the worker with children has met frequently, perhaps without realizing that others have met, conquered, and even written about the same difficulties. No doubt, references in the bibliography will also suggest topics of research for those students who may be hunting for such problems (12, 40, 64, 68, 74).

One of the more recent developments in the literature of the preschool field is that of *records.* If the newer educational procedures in this area are to justify themselves, case histories and cumulative records must be kept in order that we may study growth, learning, and personality changes. The following studies contain references and suggestions on record-keeping: 13, 14, 16, 48, 82, and 83.

For students interested in social and educational work with young children in other countries, reference 77 is valuable. Possible psychiatric service at the preschool level is considered in references 5, 6, 8, 24, 35, 36, 52, 53, 67, 69, 83, 96, and 105. Undesirable habits are discussed in 10, 52, and 53. The economic status and other conditions of the home as they affect little children are studied in reference 44. Suggestions for help with the clothes of young children are contained in 23 and 102. The client or worker who desires help on the matter of play equipment, toys, and play activities will be helped by a study of references 22 and 28. Music for younger children is discussed in references 25, 26, and 27. Nursery schools, nursery school procedures, and preparation for nursery school teaching are discussed in 15, 29, 30, 33, 47, 56, and 77. Most of the foregoing references contain bibliographies, so that the omission of good material from the present list is not so serious as it might otherwise be.

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CHAPTER VI

SOME FUNDAMENTAL PHYSICAL HABITS

Nature of Habit

There is a very true sense in which it may be said that all learning is habit formation. Even our academic learning involves the formation of innumerable habits. Mental or emotional habits, we call *attitudes* or *prejudices.* Character, morality, and personality likewise are largely the result of an infinite number of physical, motor, mental, emotional, and social habits. To discuss *habit,* therefore, is just as impossible as to discuss *life.* However, some very obvious and essential habits everyone must have if he is to live, and live with his fellows. These may be formed in uneconomical, unsocial, or physically injurious ways. Contrariwise, they may be formed in economical, social, or hygienic ways. Since there is such a vast difference between the former and the latter, it is well to ascertain, if possible, how we can help children find the *best* ways to develop *desirable habits.* Some of the essential physical habits we shall therefore consider (2, 4, 8, 10, 11, 12, 18, 26, 42, 49, 61, 66, 70, 71). Before doing so, however, attention should be called to the fact that the habits to be discussed here are not nearly such separate entities as the following treatment might seem to indicate. Any one of what might be called these *basic habits* is necessarily inextricably bound up with other habits. A child's sleep, for example, is greatly influenced by his eating and ofttimes by his toilet processes. Many other examples of such reciprocal relations can easily be seen. This is not to overlook the fact, either, that eating, sleeping, and toileting are all affected likewise by emotions, to be discussed (for purposes of textbook-organization) still later. Habits, attitudes, emotions, and moods intermingle in such a way as to suggest the color blending in a kaleidoscope.

We shall begin our consideration of some specific and temporarily isolated habits by stressing a point of great significance. By and large, it may be said that all education should have a *long-time point of view.* This is not at all to say that what contributes to a child's *present* enjoyment is valueless. Neither does it mean that children should learn things which are now meaningless to them with the hope that *someday* they will understand and fully appreciate them. It does mean, however, that we must be careful at every step of the way that what the child is learning is *in the direction* of what we want him ultimately to master. For this reason we shall ask ourselves the following questions in regard to each of the habits here to be discussed: (1) What desirable attitudes and skills do we wish the child *ultimately* to have in this field? (2) What undesirable ones may arise? (3) What are some of the difficulties peculiar to this particular habit? (4) What recommendations do research and experience have to offer concerning the formation of desirable habits and attitudes in this field? (5) What accomplishment can reasonably be expected at various ages?

Eating Habits

With these questions in mind, let us look at the matter of habit formation in regard to eating. We have already briefly discussed some of the problems connected with infant feeding and weaning. Let us now consider those of life after infancy (20, 23, 30, 46, 54, 56, 60, 62, 68, 72, 73, 74, 83). First, what desirable attitudes do we wish now and ultimately to help the child to develop? (If, at times, illustrations of *attitudes* and illustrations of *habits* seem a little confused, it will perhaps be literary style rather than child psychology that suffers.) As for attitudes toward food, perhaps the one of prime importance is *real enjoyment of food.* In little children, this takes the form of eagerness for mealtime and pleasure in eating. Later in life the same interest, if properly cultivated, develops into a more nearly intellectual feeling for menus, unusual dishes, the "art of dining"; it may stimulate desire for outdoor cooking or it may enliven the day-by-day routine of domestic cooking. At any rate, it would appear that training has gone wrong at some point, if a person reaches adult life without a real interest in, and enjoyment of, a wide variety of foods as well as an appreciation of the attendant social skills.

A second attitude of extreme importance is the desire to attain and master self-help. Modern training emphasizes the importance of simple implements, easily washable table coverings, and other equipment which will make it easy for the child to manipulate his own food. Such furnishings also help adults to let the child alone, even if his first attempts are clumsy and he does spill or drop food. A small table with an oilcloth cover is infinitely to be preferred to a place at the table with adults, if it provides an opportunity for the child to learn to feed himself in peace. This does not mean that children should continue to eat by themselves until well advanced toward the teens. Such a procedure would be to neglect one of our other values mentioned above—namely, "dining." It is necessary for a child to learn first to feed himself, but it is certainly important that he learn also to enjoy and participate in the social life of a family dinner table.

By the time a child is from a year and a half to two years of age, he should be able to feed himself with considerable skill. By this time he should handle a spoon, a blunt fork, and a cup or glass fairly well.

Nursery school practice beautifully illustrates for us a principle that psychology has emphasized for years. This is the fact that positive directions and suggestions are better than negative ones. A practiced nursery school teacher, for example, will always say: "Just a small bite. That's right, just a small bite," rather than, "Don't take such big bites." "Fork for potatoes. Spoon for dessert," would seem to be much better than: "No, no, don't eat your potatoes with your spoon. Use your fork." One often hears children themselves repeating the pleasant positive directions after the nursery school teacher or parent. Such learning is valuable.

As indicated in a previous chapter, it is quite easy for a parent to assume a spurious omniscience in regard to the amount a child should eat at any one meal. It is only to be expected that body requirements will differ somewhat from time to time. If, in general, the child's diet is sufficient and well-balanced, no great alarm need be felt over an occasional meal when he does not want to eat. Reserving dessert until the end of the meal helps in getting the child to eat the variety and the bulk that are necessary for him. Sweets have a way of satisfying and, if eaten first, will appease appetite without at the same time giving a sufficient balance to the diet. Too much milk may do the same thing. The writer once knew a little boy who was in the process of forming correct eating habits. Naturally, he loved dessert. He knew, however, that "vegetables and milk come first and then dessert." He would sit at his small table and eat some of each of his vegetables. Then he would pull the dish containing his dessert a little closer to his plate. After some milk and more vegetables, he would pull the dessert a little nearer. By the time everything else was finished, the dessert was beside the plate ready to be enjoyed to the full.

Much experimentation is needed before we shall have the last word on the value of absolute regularity in regard to habits. Certain it is that lower animals throughout the ages have thrived in spite of lack of routine for eating, sleeping, or elimination. One might ask whether, physiologically, human beings would be just as well off if they ate when they were hungry, or slept when they were sleepy, instead of being creatures of *time habits.* Perhaps we do not know the answer to that question. Children in homes where regularity is stressed do seem to have more resistance to disease and better physical and emotional health in general. How much of this advantage comes from regularity *per se* is difficult to know. Much of it may be attributable to the fact that such homes are likely to stress *other* phases of good physical and mental hygiene also. At any rate, absolute and inflexible regularity *may* become as devastating as *any* ill-proportioned good thing. However, we are all living in a world that seems to run more smoothly if people eat at approximately the same time and if business closes for man's rest at regularly appointed times. Since this is true, *if for no other reason,* it is probably well to provide habit training in regularity of eating for little children.

The question is often asked as to the extent to which appetite should be allowed to dictate what and how much a child should eat. An interesting experiment along this line was performed by Dr. Clara M. Davis on newly weaned babies (23). These babies were presented with trays containing unmixed and unseasoned foods. Attendants were instructed to offer help only when the child definitely indicated that he wanted help. Otherwise, no suggestions or help of any kind were given to the child, who was allowed to eat anything from a very large variety of foods and as much or as little as he chose. Often the babies would take handfuls of salt. They might sputter and spit and take no more for a few days, but eventually they would go back for more. Sometimes they would go on food "jags," as the attendants said, eating several hard-cooked eggs or several bananas at one meal. The outcome of the study, conducted over a number of years, was that all the children so fed gained in weight and health generally, were relatively free from colds and digestive upsets, and were voracious eaters who enjoyed their meals thoroughly. The necessary variety of food for such a procedure would render this method difficult for a private home, but it has been tried by Dr. Lydia Roberts in a nursery school (60).

Anorexia

Anorexia, or absence of desire to eat, is often quite a problem, particularly among children in upper-class homes. It has often been remarked that children in less well-endowed homes or in institutions appear to eat with greater avidity than children in good private homes. The well-known researches on the digestion in the stomach of a laboratory animal prove that unpleasant emotion will stop the whole digestive process. Several studies have pointed out also that too much attention to food itself or to "manners" at the table is a disturbing factor. The practice in some families of using the dinner table as a clearing house for all the misdemeanors of the day is bad in the extreme. A consideration of our original list of questions would seem to indicate that enjoyment of food, self-help, and *then* table manners is the irreversible order. If adults were to keep this sequence in mind, much anorexia could be avoided.

In handling cases of anorexia, investigation must also be made of certain other factors (56). Too much large-muscle exercise, fatigue, excitement, poor sleep, or incipient illness all tend to induce poor appetite. Eating between meals is so obvious a cause that it is oftentimes overlooked. Proper balance of diet and adequate vitamin content are somewhat more subtle factors. One of the functions of Vitamin B1 (thiamin) appears to be the stimulation of appetite. One sees, then, the necessity for including in the child's diet such foods as whole-grain cereals, whole-wheat bread, yeast, and egg yolk, all of which are rich in Vitamin B (56, 65). Commercial white flour is now enriched with thiamin.

In addition to real anorexia, there is also the problem of dawdling over food. Endless time may be spent at the table, with frequent and futile reminders to "go on and eat your dinner." All too often, the reason for children's dawdling is the knowledge on their part that if they take long enough mother will finally coax, play an "eating-game," or maybe even actually put the food into their mouths. Such attention-getting or adult-punishing devices should be recognized for exactly what they are and be treated accordingly.

Other Undesirable Eating Habits

An iniquity of the present age is the irresponsibility of adults as to children's eating between meals. Before meals and after meals, children of all ages may be seen on the streets with ice cream cones, popsicles, neapolitans, and other confections, the names of which no one but the children and the dealers can possibly keep up with. One wonders not only about the effect on health, but also about where the money comes from for such frequent purchases. Some intelligent communities have made serious study of this question. They have secured the coöperation of merchants near large schoolhouses, for example. With a little persuasion, the storekeepers have been induced to *push* hot soup or simple sandwiches at the noon hour and to keep frivolous desserts in the background. The whole question of allowing children to eat sweets between meals is certainly a problem to which some of our active parent-education groups might well devote themselves.

Another habit of ill repute is almost certain to appear at some time or other during early childhood. In good and poor homes alike, children, if given a chance, enjoy cramming their mouths to the limit. This pleasure is so natural that we enjoy pictures of children whose mouths bulge with apple, cake, whole lollipops, or other good things. What is amusing in a picture or advertisement is quite otherwise at the home dinner table, however. But we must realize that this eating phenomenon has a real and respectable origin in neurology. The taste buds, or nerve endings for taste, inside the mouth give us our taste sensations. When these sensations are pleasant, we like the experience. In childhood, the complete number of taste buds is present and they are highly active. Since the mouth cavity is smaller than in the case of the adult, the nerve endings are, of necessity, much closer together. The result is easy to see—a child crowds his mouth full and stimulates all, or a great many, of these pleasure-carrying sense organs at one time. Perhaps if adults *could* perform this feat, they *would*. Training in more socially acceptable *mouthfuls* can be made much less painful if adults remember their own childhood enjoyments and if they remember about the crowding of the taste buds.

It is a matter of common observation that both the manner of eating and actual likes and dislikes in regard to food are often greatly influenced by the child's imitation of older members of the family. This is one of the points of advantage the nursery school has. Where everyone is eating the spinach, the carrots, or what-not, a child is much more likely to eat without stopping to argue the question. Soon he finds that he actually enjoys the debatable article and really wants to eat it.

The gradual introduction of small amounts of new articles of diet enlarges the child's taste interests. Not only health but social requirements as well demand that we avoid food fixations. Formerly it was recommended that new items be introduced in small amounts, mixed with some other article with which the child was already acquainted and of which he was fond. There seems to be a trend away from this practice at the present time, however; the idea is that children should be taught to recognize and enjoy food flavors separately.

Obesity

Obesity may well be considered in connection with eating habits, although the condition is by no means always merely a matter of too-high caloric content of food. Glandular conditions are often responsible for overweight. Psychological factors, however, play a large part. Very often a child who needs emotional security overeats as a kind of compensation for his emotional deprivation. Likewise, the overprotected and pampered child may overeat and become obese (14, 16, 17).

In a later chapter mention is made of the necessity of securing the coöperation of a child whenever dietary regulations have to be enforced. In diabetes and allergic conditions, as well as in obesity, locking the cupboard or barricading the icebox are not nearly so effective as getting the child to "help" in maintaining his prescribed diet. In fact, the former procedures are bound to fail.

Pica

Before leaving the matter of eating habits of children, mention should be made of an abnormal habit which doctors, nurses, and social workers sometimes encounter. The perversion is called *pica* (1, 31, 38) out of respect for the magpie (Latin *pica,* magpie) with his tendency to eat all manner of things. The condition may begin in infancy. In some children it develops later, but usually it has its inception in the preschool period. Those afflicted will eat almost anything —sand, mortar, plaster, paint, dirt, soap, strings, sticks, clay, and so on. The cause of the perversion is still quite obscure. Most authorities agree that it is not caused by physiological necessity, however. The condition seems in large numbers of cases to be associated with rickets, protracted bronchitis, tuberculosis, round worm, hookworm, gastro-intestinal diseases, feeble-mindedness, nervous temperament, or neuropathic constitution. The causal relation, however, has not been determined. The question is further obscured by the fact that often whole neighborhoods, including adults, indulge in food perversions: witness the clay eaters of our southern states. In such cases, it is hard to know how much is a habit which has its origin in a tribal ritual and how much is due to hookworm infection or to still other causes.

A surprising amount of the eating of non-edible substances can be indulged in without much apparent harm. However, there is danger of the formation of "hair-balls" in the stomach when children persist in eating hair, or of lacerations when they swallow knives or other sharp substances. There may be diminution of normal food desires, indigestion, and constipation. Lead poisoning may develop when paint is sucked off furniture and toys. Kanner (38) cites the case of a child who, it was reported, "has been nibbling paint for a long time, demolished the porch railing, and 'eaten up' the window screens." In such cases, as a rule, the more serious concern is that these children are *otherwise* in need of examination and treatment for associated physical ailments or intellectual and emotional anomalies. Where the perversion is not too bad and where there is tranquil, intelligent home life, the condition can usually be successfully handled. It is rare that mechanical restraints are helpful. Keeping the child away from the desired "food" so far as possible and improving general health and emotional morale will usually bring about a cure. There are reports of a large number of children who could not be so treated in their homes, but who recovered quickly and permanently under foster-home care.

The eating of urine or fecal matter is known as *allotriophagy* and is associated with greatly disturbed emotional conditions or with low-grade intelligence. If a child is not too defective intellectually, and the habit persists in spite of gentle and unemotional adult attempts to prevent it and substitute something else for it, then psychological and psychiatric treatment must be instituted.

Toilet Habits

In regard to *toilet training* (19, 21, 66, 72, 73, 74, 84), one may well raise again the question, "What desirable habits and attitudes, both now and in the future, do I wish this child to have?" Ultimately we should hope for such unemotional, matter-of-fact attention as will maintain regular and adequate elimination, together with due regard to conventional niceties.

In the early years, even though adults might wish it were otherwise, children sometimes show great interest in toilet processes and in excreta. It is easy to say too much on this point, to make unwarranted generalizations, and to assign reasons and motives that are mystical rather than scientific. Some children apparently never display any disturbing amount of curiosity about such matters. Others do. Perhaps all we need to say is that if *our* attitudes and habits in regard to these functions are normal, we shall not be shocked or become repressive if we do see such interest in children. The interest *per se* is neither unusual nor pathological. Although we may desire that, as time goes on, the child will be quite matter-of-fact about all bodily processes, we must also realize that curiosity or interest about excreta is not removed by "don'ts." Never should we show any alarm or emotional disapproval in such cases. It is better to allow the child to appease his curiosity in our presence and with our knowledge than to force him to satisfy his curiosity in other circumstances. After a time it may be well to offer substitute attractions to the child, not in order to *quell* his interests in bodily functions, but rather to *widen his interests* so as to include other things. Where there has been no emotion displayed by the adult in toilet training, a child will usually soon find many things that are more absorbing and offer greater opportunity for activity.

A habit of great importance in regard to evacuation is that of voluntary control. In infancy, very little effect is produced in consciousness by elimination. Along with other sensory impressions, however, distended bowels and bladder begin finally to obtrude into consciousness. The effect in many cases is to produce more or less random movements which the mother may come to recognize before the child is able himself to vocalize his needs. Anticipating the actual emergency offers the first clue to habit training. It would appear that this can be done without harm to the child.

There is great difference of opinion among authorities, however, as to the age at which bowel and bladder control should be begun. On the one hand, there is the grave danger that too-early attempts to train will be accompanied by considerable emotion. There are certain groups of mothers, for example, between whom there actually seems to be rivalry to see whose child can be "trained" earliest. Such training is probably achieved at a high cost of emotional tension. On the other hand, most desirable habits which are neglected *too* long are the more difficult to establish. The question then becomes one of determining the age for the *individual child* at which training can be accomplished with a minimum of emotional pressure and a maximum of ease.

Most authorities would say that even much under a year a child can be put upon a small vessel in anticipation of bowel evacuation. The recommended ages range from about three or four to eight months or even a year. It is assumed, of course, that the only emotion involved in the situation is mild encouragement or recognition for success.

Disappointment over accidents or failure to evacuate must not be evidenced. Bowel control can usually be established by around two years.

There is also great difference of opinion as to the age for beginning bladder training. Opinions range from before the end of the first year to the beginning of the second quarter of the second year. The substitution of drawers for diapers shortly after a year or fourteen months may be helpful, since wet drawers are more uncomfortable than wet diapers. Daytime control of bladder should ordinarily be established by around two years, and dry nights should be the rule by two and a half to three years. It is customary to speak of bladder incontinence as *enuresis* after about three years of age, not much before.

The White House Conference Report (3) shows that both bowel and bladder control are achieved earlier in girls than in boys in the American homes studied by this Conference. Between 60 and 70 per cent of children are shown to have bowel control at one year of age; about 90 per cent at two years; and almost 100 per cent by three years of age. As for bladder control, in the average American child it is reported to be achieved in 40 to 50 per cent of children by one year; in about 80 per cent by two years; and in about 95 per cent by three years.

If we keep in mind that *voluntary* control of evacuation is to be achieved, several matters immediately become clear. For one thing, we see, then, the importance of having a child thoroughly *awake* when he is taken to the toilet at night. The evacuation must occur only when he *knows* it is occurring. It is helpful for those in care of children to determine, through observation, when evacuation is likely to occur. At night, for example, a child may be found to urinate three or four hours after he has been put to bed and then again after another period of three or four hours. In such a case, he should be taken up or, when he is a little older, awakened and told to *get up* just before these times. The adult may have to resort to the use of an alarm clock himself. Care must be taken to see that the child is thoroughly awake. There is little danger that he will not go back to sleep again. The intervals should gradually be lengthened; after a while one rising can be dispensed with, and finally both or all.

The Psychological Corporation rents out an apparatus for the control of enuresis based upon the idea of waking the child before his bladder empties. It is called the Mowrer Enuresis Apparatus (52, 53) and consists of a pad upon which the child sleeps. This pad is connected electrically with a bell of adjustable loudness. When the pad is moistened by even a very few drops of urine, the circuit is completed and the bell begins to ring. The bell almost invariably awakens the child and almost always inhibits further urination. If the child does not waken, an adult wakens him while the bell is still ringing. "The cure is effected when, as a result of the repetition of this sequence of events, the waking response, instead of occurring to the bell, becomes conditioned to the stimulation incident to bladder distension and occurs in advance of the actual onset of urination." Needless to say, the electric current is weak and cannot possibly come into contact with the child. Institutions, where enuresis is always a matter of administrative concern, are reporting success from the use of the instrument. (For other matters connected with enuresis in institutions, see 50, 51, 58 and Chapter 8.)

By keeping the principle of *voluntary* control in mind, we see, also, why we must not use the toilet period at night for a period of fondling, nor the daytime period for a time of sitting on a toilet seat playing with toys. Time on the toilet should be limited, even though there has been no success. The time and the place must be associated in the child's mind *only* with the process which we wish to have occur there and then.

As in the case of eating, a verbalization of the "right" thing is found to be helpful in toilet training also. Having a name for the place, the process, and the result helps the child to articulate the need and the adult to commend success. The vocabulary chosen should, in so far as possible, be made up of words which the child can easily learn to say, which will be understood by strangers who may have need to care for him, which will not have to be unlearned as the child grows older, and which are socially acceptable.

Although in the early days of training it is well to accustom the child to the use of a seat or a vessel that is comfortable and accessible, it should also be remembered that gradually the training must be extended to other equipment. It is not an uncommon thing for a child to be so encouraged and praised for the use of his own adjustable toilet seat that this equipment actually has to be carried around wherever he goes if he is to be expected to evacuate. This slavery is comparable to the food fixations some children are allowed to form. Baffling cases for physicians and psychiatrists are those of adults who have similar time or place restrictions in regard to evacuation. Inability to void in public toilets, in the presence of others, in hospital beds, or on trains sometimes has its roots in childhood training and may require psychiatric treatment.

With children of the runabout age who are on the way toward reliable control, great help can be given in other ways. One is alertness of the parent in calling the child in from play soon enough. "Time for toilet now. That's right; we go to the toilet now and then play some more" will save many an accident. Simply made clothes should be provided for runabout children so that they can easily unfasten their own clothes in anticipation of toileting. One or two large buttons and buttonholes, instead of the more complicated fastenings of the old days, has speeded up toilet training without any of the dangers incident to some methods of quick training. The simple expedient of limiting the amount of liquid taken into the body after four or five o'clock in the evening is often overlooked also.

Difficulties in Toilet Training

The question naturally arises as to what is wrong when toilet habits, particularly bladder habits, are not established at something like the ordinary age (28, 29, 50). Reymert (58), in his summary of the literature on enuresis, found 102 causes listed, each of which had its proponents and its opponents. Length of breast feeding, conditions of birth, emotional difficulties, excessively deep sleep, neuromuscular fatigue, sugar balance, and many specific physical factors have been mentioned as having etiological significance. Obviously, the therapeutic program adopted depends upon one's idea of causation.

Heredity often gets the blame. It sometimes happens that several members of the same family have enuresis. The fact is that, where one child in the family has faulty habits, the chances are perhaps more than even that other children in the same family will have those habits also. The reason, however, lies in heredity in very, very few cases, and in those only where some actual organic or physiological defect can be shown to run through the family. Faulty training is by far the most frequent factor involved in enuresis, and it follows that the parent who ignores or does not know rules for habit training will probably be as ignorant with one child as with another. When the parent thinks "it runs in the family," he feels that it is useless to institute habit training. The matter becomes particularly involved when two enuretic children sleep together. What incentive does either one have to keep his bed dry under such circumstances? As a matter of fact, it is sometimes found that establishing dry habits in one of such children *cures* the other one also.

Where a child has not established dry habits by three or four years of age, it is common to take him to the physician for an examination, in order to determine whether there may be any structural or organic defect. Kanner (38) says his experience shows there is no such defect in about 68 per cent of the cases he has seen. More often the trouble is that proper training has never been instituted, and there is no expectation of success on the part of parent or child.

At any age, incontinence of either bowel or bladder may be the result of wrong relationships between child and adult. This is so true that young children will sometimes be incontinent with one adult or in one home and not with another adult or in another home. Incontinence may be the result of negativism or of a desire to punish an adult who is not understanding. The cure in such cases lies, of course, in the removal of the cause plus encouragement for right-doing.

It is a discouraging fact that, after a child has apparently achieved control, lapses may occur. Let us say that a child of four begins having enuresis at night after having been continent for several months. Marked change of food or water intake may account for temporary lapses. More commonly the lapse is a premonitory sign of an approaching sickness, such as chicken pox, measles, or a cold. Very frequently the breakdown of the habit is occasioned by an emotional upset. Children who have been unprepared for the coming of another baby in the family and have been puzzled and hurt by the advent sometimes have toilet lapses for a time. Worry or fear are potent factors in disrupting toilet as well as other habits (28, 29).

In older children who have been continent for several years and then become enuretic, one may be reasonably sure that there is an emotional disturbance needing careful study. It may be the child's way of substitution for masturbation which he is trying to overcome. It may be the result of deep anxiety and insecurity about family relations, or it may be an accompaniment of unsatisfied interest in sex matters (5). Such cases require careful study to determine the emotional etiology.

Perhaps in few fields of child-rearing have more wrong things been done than in regard to toilet training. Shame or punishment should be resorted to, *if ever,* as rarely as major surgical operations. Yet both devices are actually used very frequently. It has been commonly recommended that, when children wet the bed, they should be made to wash their own sheets. The writer once knew of a *five-year-old* who was so handled. On the one hand, there is likelihood that splashing around in laundry tubs in the basement will be regarded by the child as an unusual privilege and as a good time. When this is the case, then certainly nothing in regard to toilet training has been accomplished. On the other hand, suppose the child does *not* enjoy the activity, then it becomes punishment to him and something worse than nothing has been accomplished. One can scarcely justify the procedure with young children on the basis of its being a "natural" punishment, or that the child is helping to carry his share of the load of domestic duty. It should be obvious to anyone that a young child *cannot* wash bed linen, if, by that, one means anything more than getting it wet.

Another device that has been recommended is to take the child to the toilet during the day and have him actually practice, to get the "feel" of starting and stopping the flow. This is certainly a questionable procedure since it may center the child's attention upon organs or functions that are already too much in the limelight.

All manner of suggestive devices have been mentioned also. One of these is to give the child a doctor's prescription which he is to put under his pillow at night with the assurance that so long as it is there he will surely have a dry night. One wonders whether a child who is as suggestible as that might not have right habits *suggested* in some simpler and safer way. This is not to say, of course, that suggestion should not be tried. Many a child has been benefited by the assurance that he is improving, that he is growing up, and that mother is so glad to help him. Self-confidence is of help here as in every other field of human endeavor.

The question as to the use of gold stars for dry nights is usually raised in discussions on toilet training. Their potency lies in the fact that they give the child an obvious evidence of and reward for success. They really constitute a "learning curve" which a child can readily understand. It should be noted, of course, that the parent's attitude toward days when stars are awarded and days when they have to be withheld should be quietly encouraging in the former case, and not at all punishing in the latter. Stars, like all other so-called *extrinsic rewards,* have merit only in so far as they make the desirable conduct clear-cut in consciousness, make the desirable conduct satisfying to the individual, and help to build up *internal* satisfactions which will tend eventually to make *external* ones unnecessary. However, age and other differences in children make such extrinsic rewards satisfying to one child and not to another.

Sleep Habits

One cannot appreciate the desirability of good *sleep* habits (20, 27, 36, 42, 46, 56, 68, 73, 83) in little children if he does not understand the physiological necessity for sleep. If this were correctly understood, many adults would be spared their mistake in thinking their inability to sleep indicates that they do not need to sleep. Modern investigations have led us to believe that the waste products of fatigue, which are normally eliminated largely during rest and sleep, act in much the same way as alcohol. Within limits, at least, the more alcohol one takes, the more he craves it, even though it may be very bad for him. So, within limits, fatigue actually seems to make one want more fatigue. Oftentimes little children insist on more and more activity until their behavior amounts almost to hysteria. It is not uncommon for them to be "too tired to go to sleep." Overtired adults similarly are likely to be unable to let go, to quit, to relax, or to do nothing. In children, elimination of waste products and the quiet induced by rest and sleep seem to be absolutely essential for growth of body and for protection of the nervous system. In fact, as Thorndike (76) says, "The essence of mental hygiene is then—interest for efficiency; and for protection, sleep."

Resistance to disease, the doctors tell us, is lowered by insufficient sleep. In laboratory research, it has been found that some experimental animals suffered more from sleep deprivation than from food deprivation. The growth curve of an individual child may be seen to fluctuate as his amount of sleep is increased or decreased. It is easy to see, then, why not only health but disposition and behavior as well are deleteriously influenced by insufficient sleep. In some cases, cause and effect work in the opposite direction; that is to say, poor sleep may be the *result* of infection, malnutrition, or calcium insufficiency.

In this connection, perhaps we should consider the whole matter of relaxation (35, 36, 37). The greatest barrier to one's falling asleep, as a rule, is that he cannot stop thinking, cannot lie still, or cannot relax his voluntary muscles. Medical research indicates that many of the ailments that are prevalent in our neurotic age also come from constrictions and tensions in the body, sometimes in particular parts of the body. For these reasons, "learning to relax" must be either a direct or an indirect part of the curriculum of the future.

Nursery school and kindergarten teachers now are carefully watching for the child who cannot get the most out of his rest period because he cannot relax. Sometimes in such cases the teacher plays or hums very soft music. In other cases she slips quietly to the cot or the floor blanket on which the child is lying, pats him softly, and later slips away. In some cases she suggests to the child that he see if he can make his arm "real limp," "real soft," "as if it were made out of string," "as if it had no bone in it," or whatever expression will help the child get the idea of *how it feels to relax.* Then the procedure may be repeated with the other arm, the legs, and so on. (Psychologists have suggested that adults do the same thing and carry the process one step farther to include all the "organs of internal speech"—the throat muscles, tongue, and cheeks.) It should be remembered, too, that in most individuals relaxation is not a matter of something that one can turn on or off at pleasure. It is, as a rule, a more gradual process. For this reason many parents provide a quiet period for their children *before* they are sent to bed. Nursery schools, as a rule, follow such a practice. Adults might profit from this procedure.

As for the desirable habits and attitudes which normal individuals should develop toward sleep, perhaps we can say that ultimately every adult would be better off if he *enjoyed* going to bed and to sleep. Furthermore, he should have such habits established that he could go to sleep immediately upon going to bed, and should not be dependent upon too many particular trappings or conditions in order to go to sleep. Every adult also ought to be honest with himself as to the amount of sleep upon which he maintains his best health, and then be courageous enough to order his life accordingly. Sleep researches indicate that better sleep is possible where individuals sleep alone. This habit therefore should, if at all possible, be begun at birth and maintained thereafter.

Difficulties in Sleep Habits

Looked at the other way around, what are the undesirable attitudes and habits of adult life against which we must protect our child? Perhaps some of the readers of this book may be among those unfortunate individuals who have to read themselves to sleep at night. Instead of having the nervous-system connection, "go to bed, go to sleep," they have built up "go to bed, read, lose meaning of page, go to sleep." What a slavish waste of time! One might question the value to mankind of the invention of the bedside lamp.

Some adults must have a certain degree of darkness, or of light, in order to go to sleep. Sometimes mothers are unable to go to sleep until they know that all other members of the family are in bed and asleep. Many adults cannot sleep with any noise; and others cannot sleep without noise—witness the sleeplessness of some city folk who go to the country. Some have to have certain pillows and are obliged to carry their own pillows with them when traveling.

Most of these examples are the bad end-results of training gone wrong in childhood. Many of our adult neurotics are the victims of incorrect sleep habits of years' standing. A few years ago, a physician sent to the writer a mother and her four-year-old son. The child, since babyhood, had never been known to sleep a night through. His usual practice was to get up many times during the night, wander over the house, go to the icebox, cupboard, playroom, or even to the cellar. He did not demand that others get up. In fact, much of the time the adults in the family did not know the child was out of bed until they heard strange sounds in remote parts of the house. Sometimes at four o'clock in the morning the parents would be awakened by noise and would find that the little boy was prowling around downstairs perfectly contented—but *not* asleep. The doctor had tried various suggestions and even medication, but had seen little change in the child's sleep habits. He was a handsome little fellow but obviously nervous. Who wouldn't be under such a regimen? Since health matters had already been looked into, it seemed wise to begin our study with some inquiry about the family habits and the household routine.

Just a few questions were required to bring out the following facts: The child was the only grandson on both sides of the family. There were not only four grandparents but also several aunts and uncles living in the vicinity of the child's home. Most of the relatives would not think of entering upon their own evening's activities without having gone by the house to see Junior before he went to bed. Usually, like the Greeks, they came bearing gifts. Sometimes one would bring chewing gum, but it was never a stick of gum, nor yet a package of gum; it was always a carton of gum. At the time of the first visit to our office, the mother said there were eight large teddy bears reposing in the attic because Junior seemed to prefer the *ninth* one that had been given to him recently! The Christmas before, boxes containing an assortment of trucks of various sizes had been popular gifts in the department stores. Junior had received *fourteen* such boxes. Finally, the question was put to the mother, "Has Junior ever known what peace and quiet and tranquility are?" With a vehement shake of her head and a determined twist to her mouth, she almost *cried* out, "Never!" When the whole picture took shape in front of her eyes, she realized what was happening to her son. So convinced did she become of the necessity of providing serenity and relaxation for the child that the next time she was seen she reported that she and her husband had moved to an entirely different part of the city. By so doing, they were able to have a quiet yard for their son and to learn, themselves, how to maintain a tranquil household. One day, a few months later, when the child was seen again, he had a healthy glow to his skin, a brightness in his eyes, and a genuine serenity in his poise. His mother reported that after a very short time of the more quiet home life the sleeping problems had disappeared. There had been no trouble, she said, about the child's "sleeping around the clock," which is a good limit for all growing children. One shudders to think what would have happened to the progressive physical, nervous, emotional, and social development of Junior had he continued in his early pattern. In milder degrees, the same phenomenon is often observed in children who are allowed to play too boisterously just before going to bed.

Some parents in their anxiety to have good sleeping habits developed practically *turn off* the household when the child goes to bed. In such families the radio is silenced, everyone whispers and tiptoes, and activity is stopped in general. Few procedures could be worse! Perhaps the radio need not be turned to top speed and perhaps the older children need not play cowboy in the living room. These measures, however, are as much to the advantage of the remainder of the family as to the child about to go to sleep. The comfort of the entire family should not, as a rule, be sacrificed for the advantage of any other one member of the group. Furthermore, it is well to form early sleeping habits in something like the setting in which they will be expected to function throughout life.

At the other extreme are those parents who have so little regard for the necessity of sleep that practically *no* provision is made for reasonable quiet. Many a tired child is allowed to go indefinitely without being put to bed just because no one takes the time to do it. Others go to sleep in a chair or on the floor because of adult negligence. Some have to do the best they can to sleep in spite of radio, raucous laughter, or card parties.

Regularity as to time for going to bed is highly desirable. Nevertheless, as children grow older and participate more in the social life of the family, there come times when a deviation of 15 minutes may be weighed in the balance against a desirable family activity. In such cases a broken rule may do less damage than a wrought-up emotional system.

The state of mind in which a child—or an adult, for that matter—goes to bed has a great deal to do with the quality of his sleep. Little children often have their sleep interfered with by fears of one kind or another. There are many sources from which fears at night may arise. Adults do not always realize that a child's very first experience with the dark may be when he awakens in bed. Since familiar objects look very different in the dark than they do in the light, it is small wonder that fears arise in the child's mind without anyone's knowing how or when. Fears likewise arise from dreams. Of course, the dream may be a revival of a daytime fear. There may even be a fear of *not going to sleep,* or a fear of wetting the bed. All such fears must be reckoned with as interferers with sleep and must be treated intelligently. Children's fears are not eliminated by an adult's laughing at them or by a grown-up's saying, "That's silly—there's nothing to be afraid of." The fear must be taken for just what it appears to the child. He should, when old enough, be encouraged to tell about it. If he is allowed to do so, without exaggeration and without too frequent repetition, he will know, at least, that his parents understand. He will probably develop a less emotional attitude himself if he sees that they are sympathetic but otherwise unemotional. A friend of the writer once discovered that his son, who had never shown any fear of the dark before, for some unknown reason suddenly became unwilling to stay in a dark room at night alone. The father, being a good psychologist, realized that the child's fear would disappear sooner if it were recognized and provisions were made to help terminate it. An extension cord was therefore attached to one of the electric lights in the room and carried to the head of the child's bed. Whenever he felt afraid, he could, without leaving his bed, pull on the light and assure himself that all was well. The child was thus helped to overcome the fear, which disappeared entirely in a short time.

Our attention has been called recently to several cases of children who were disturbed in both eating and sleeping by the fact that the same room served as playroom, bedroom, and dining room. Too many Mother Goose pictures on the wall or in the wall paper or too many toys inviting activity may offer the child anything but the relaxation and serenity which both his meals and his retiring demand. The writer once knew of a four-year-old whose going-to-sleep habits were disturbed considerably before her mother discovered the cause. It seems Betty was afraid of "sailing away on a boat," as the lullaby has it, for fear she wouldn't come back.

Fear that the parents will go away and not come back keeps some children awake. It is safe to say that in all such cases the child's emotional condition is otherwise bad or such a state of affairs would not exist. The child who has been encouraged to go out in the yard alone to play, to go to the nursery school, or to go to a little friend's house will not, as a rule, develop such fears and dependencies. Distress over the coming of a new baby, hearing of death, being lost, or many other emotionally disturbing factors may induce a dependence of the child upon his parents and an unwillingness to let them go out of his room at night. Ideally, there should be no difficulty caused by saying to any child old enough to understand the meaning of the words, "Yes, John will go to bed and go to sleep; father and mother are going out for the evening; and then in the morning John and father and mother will all have breakfast together."

Alas, there seem to be so many factors that interfere with the establishment of good sleep habits compared with those that facilitate sleep! A feeling of guilt about something he has done may keep a child from sleeping well. This is so true that someone once advocated having a sort of confessional for the child after he was tucked into bed and just before he went to sleep. The idea was that if the child's mind were free he would sleep more easily. The difficulty about a scheme of this kind is that the very children who would be most likely to profit by such a procedure are exactly the ones most likely to suffer from it. One child, upon whom it was tried, confessed more and more wrongdoings night after night when she discovered that the longer she made her story, the longer her mother would sit by her side! If a child feels that at *any time* he can go to his parents and unburden his soul, there is probably no need to reserve bedtime for such an outpouring. This is not to overlook the fact that sleep can be and often is definitely disturbed when a child is carrying around an emotional burden which he has not yet shared with his parents.

Some authorities insist that children should never be sent to bed for punishment. The argument is that the child then associates going to bed with unpleasantness, which thereafter interferes with sleep. It is certainly true that if going to bed means being sent abruptly away from interesting things which the rest of the family are doing, resistance is likely to be aroused. This situation is much more easily prevented than cured. In all fairness to children, too, it should be said that they like to finish the block bridge or the jigsaw puzzle, or whatever the activity upon which they may be engaged, just as much as an adult likes to finish his paper or his chapter before he goes to bed. Five minutes' warning, which will allow the completion of a unit of activity, seems only fair.

Imitation of adults influences children's sleep just as it does their eating. Children may even be heard using grandmother's words, "I never batted an eye until three o'clock," or "I heard the clock strike every hour." Someone tells of the child who declared, "I just slept once all night." Someday it will be just as bad manners (it is already bad mental hygiene) to talk about one's sleeping problems as about one's digestive disturbances or one's running nose. Children sometimes even copy the anxiety of their parents as to whether they, the children, are developing good sleep habits. It is to be hoped that the time may soon come when all such things will be taken more as a matter of course, will be expected to function normally, and will then be left out of the conversation.

All too often, removable and unnecessary disturbances cause poor sleep in children. Even in otherwise good homes, children are sometimes given beds and mattresses to sleep upon that adults would not tolerate. The amount of bed covering, too, is of importance. No rules can be laid down that will be equally appropriate for all houses, all climates, all ages, or all children. Nevertheless, being either too warm or too cold interferes with a child's sleeping just as much as with an adult's. The fact that a child kicks the covers off, however, does not necessarily mean he is too warm. A restlessness induced by poor digestion, overfatigue, or emotional states is often the explanation and must always be considered as a possibility. Hunger, too full a stomach, too much starch, too little calcium, pain, itching, or tight clothing cannot but interfere with sleep.

The question of lights at night is sure to be raised by someone who has been faced with a child's demand for light. To leave a light or not to leave a light, that is the question! Ultimately, we hope, the child will be able to sleep without one. We believe it is more restful. In fact, some physicians even prescribe that their city patients who cannot entirely avoid street lights sleep with black eye masques over their eyes. Sleep in the dark is undoubtedly more restful, other things being equal. But suppose other things are not equal. Suppose a child has, in spite of our best efforts, developed a fear of the dark. Certainly the emotional calm that is induced in such a child by a dim light in the hall is worth infinitely more than anything he loses from having a light. Some authorities even suggest a small lighted candle which the child can watch. The claim is that the child tends to get drowsy while watching the candle and that he gets more and more sleepy as it burns down.

Should a child be allowed to take toys to bed with him? How many adults can remember some cherished possession, perhaps a new gift, which had to be taken to bed and put under the pillow for the night? Certainly that joy, that sense of ownership, that protective attitude, all have in them the makings of good. The question, then, seems to resolve itself into this: first, will the toy stimulate the child and thus keep him awake; and secondly, will he thereby develop a habit which will prevent his sleeping unless he has the usual object? In regard to the first point, there is obviously a difference in the appropriateness of toys. A sand dumper, a toy truck, or a whirligig are likely to encourage activity. On the other hand, a cuddly doll, a Peter Rabbit, or a teddy bear are quite suggestive of quiet rest. There is probably no harm in allowing a quieting toy to be taken to bed, particularly if it is not always the same toy. It would seem rather like slavery to have a child require a *certain* doll before he or she will go to sleep. The doll might be forgotten sometime when the child and family went away from home! If there is likelihood that the child may waken in the morning before time to get up, it would seem only sensible to have a toy nearby that he can reach and play with. If such play keeps him, and the family, in bed a little longer, certainly no harm can come from it.

Children sometimes have other *habit fetishes.* Some children must twist the corner of a particular blanket or suck the end of a certain bedspread tassel in order to go to sleep. A small acquaintance of the writer had for the seven years of his life slept with a blue blanket on his bed. When the blanket needed to be washed, it had to be dried and returned before the child would go to bed. He even dragged it around over the floor in the daytime, sucking one corner all the while. The bedraggled covering received such hard usage that it wore out—and down—until finally it was only about one-third its original size. Nevertheless, the remnant had somehow to be put on the bed each night. The thing that finally broke the dependence of the child upon the blanket was his desire one summer to go to a camp with some friends. His mother seized upon the opportunity and told him he could not go. When he asked why, she explained that, if he went, the other boys would make fun of him and his "blankie." It was an awful struggle, but finally the boy decided for himself that going to camp was a bigger thing than sucking a blanket, and the habit was broken. Of course, such a habit should never have been formed.

While the desirable amount of sleep has been discussed in a previous chapter, it might be well to mention here the question of the daytime nap for preschool children. Some authorities recommend that at least until two years of age there be two naps a day, one in the morning and another in the afternoon. From that time on, certainly through the third and fourth years, and even the fifth, if possible, an afternoon nap is advisable. During the third or fourth year, there is likely to be a strong protest by the child against a daytime nap. Often mothers resort to the device of assuring the child, "You need not go to sleep, but just rest awhile." Usually the child goes to sleep in spite of himself when he is assured that he need not. Curiously enough, during the fifth year or thereabouts, the daytime nap is likely to break off entirely and sometimes even suddenly. It is not so much that the naps become shorter and shorter but rather that they simply stop entirely. As the child grows older, if it is found that the nap interferes with his night sleep, it may be necessary to shorten it.

Another point of significance in regard to the daytime nap is, as mothers often complain, that the child seems more irritable and tired after the nap than before. This is likely to be the result of a chronic fatigue which has been only partially relieved by the nap. It indicates the necessity for more rather than less sleep.

For school-age children, some public schools are providing rest periods for many children besides those in the "fresh-air classes." A quiet time is provided in which the children can at least put their heads on their desks if space for lying down is not available. Some children, the doctors say, should lie down for a time during school hours, even if they have to leave the room to do it. If this is a good thing for the child, then we should do everything in our power to make him *want* to do it. He must be spared all embarrassment about the matter. He should not be made to feel conspicuous or be singled out for attention. (In most cases he would not want such notoriety, but if he *did* enjoy it, it would still be extremely bad for him and should be avoided.)

Parents often complain that daylight-saving time interferes seriously with the sleep habits of their children. Certainly it requires at least a temporary adjustment. Perhaps, however, one of the greatest difficulties is not so much the effect of "broad daylight" at bedtime as the fact that other children are likely to be still playing outside. It is probably the social deprivation rather than the sunlight that interferes with going to sleep. A study of the sleep of orphanage children (57) suggests that, all other things being equal, daylight-saving did not lessen the total amount of sleep by these children.

The head-banging or head-rolling in which some children engage in their sleep must not be confused with temper tantrums in which children hit their heads against the wall. The etiology of the former behavior is not very well known. Putting the mattress on the floor where the bang is likely to be followed by some discomfort is recommended by Holt and McIntosh (31). Occasionally the neurotic behavior assumes a different form and shows itself in head-rolling, *jactatio capitis nocturna.* The sleep seems not to be disturbed while the head rolls in a rhythmical manner perhaps the greater part of the night. In some cases, the shoulders and trunk muscles are involved also. The writer once saw a case which had started as head-rolling. Later the activity became more diffuse. Finally the child would seize the bars of his metal bed and rhythmically shake them until the bed rocked on the floor. The parents were even at one time asked to leave a hotel where they happened to be staying, because of the annoyance that other guests experienced from the banging bed. These facts came out in getting the developmental history of the child when, *several years later, he was referred to a psychological clinic because of problem behavior.* As a rule, such cases show other indications of nervous and emotional disorders. The writer has talked with pediatricians many times about such cases without getting much help, it must be said, as to either etiology or treatment. The feeling has grown in her mind, however, that bed-rocking, head-rolling, and all similar behaviors are indicative of a very unstable nervous system that is likely to show behavior defects in a variety of forms. Approach to the problem via general tranquility and serenity in so far as they can be secured is the only treatment that anyone seems to have been able to devise.

Since workers with children often are confronted with problems of night terrors in children, it may be well to consider this point briefly. While all authorities do not do so, Kanner (38) makes a distinction between night terrors, *pavor nocturnus,* and nightmares. Certainly night terrors are not to be confused with ordinary bad dreams. In the typical night terror, the child does not awaken and therefore members of the family or familiar objects are not recognized but are rather woven into the fabrication of the hallucination. The child's features may be distorted, presenting a picture of extreme distress. He may jump from his bed and run about clinging tenaciously to his mother and crying loudly. After the episode is over, he has no recollection of the event whatsoever. This is not so in the case of the nightmare.

Obviously, the whole occurrence is predicated on the basis of a very disturbed personality which needs psychiatric attention.

Dressing Habits

Learning to *dress* oneself in preschool years imposes responsibilities upon one's elders if one is to learn easily (20, 24, 63, 78, 79, 82, 84). We may ask ourselves here as elsewhere, "What are the final ultimate attitudes and habits which a finely reared adult should have in regard to dressing and clothes?" One is tempted to list first in such a category *enjoyment of clothes.* By that we mean ability to enjoy clothes and to be sensitive to them. It has been said that some women *buy* hats, they don't *choose* hats. There *is* a difference, and perhaps more beauty could have been put into the lives of some who are now adults if their rearing had included training in real enjoyment of clothes. This, of course, involves the subtle problem of stimulating interest in clothes without destroying perspective. That is to say, our training is faulty if it does not teach that beyond a certain point an individual's clothing, on the one hand, and his personality or worth, on the other hand, are two different things.

Perhaps a second thing we should like our training pattern to include is skill in selecting from one's wardrobe what is appropriate, and skill in buying from stores for quality, value, appropriateness, and beauty. To go a step further, training should include the development of skills in dressing and caring for one's appearance.

One other habit which should be mentioned is that children should be taught just as early as possible to accept dressing (or being dressed), bathing, hair-combing, and tooth-cleaning agreeably and good-naturedly. This will require the same tact, patience, and help in growing up that all other learning processes require from a good teacher. Surely the end result justifies the means.

As we look over these desiderata, we can see that the training in most particulars can be *begun* quite early in life. By two years of age, many children can take off most of their clothes, at least after the clothes have been unbuttoned.

Unlacing shoes, taking them off, pulling off stockings, and pulling arms out of sleeves are among the first accomplishments. Many four-year-olds can button their own clothes, and surely by age five children should be able to do all the simpler routine daily dressing tasks. Long plackets, large buttons, buttons down the front, shoelaces with tips would seem to be the just due of any child who is expected to master the dressing process. Some of the better clothes manufacturers nowadays are giving very definite thought to the matter of making clothes that are not only hygienically sound, but that also *encourage* self-help. Government bulletins and references listed in the bibliography at the end of this chapter are intended to be of help in the choosing and making of appropriate clothes for children. Detailed verbal instructions during dressing are helpful.

Recently, the writer had forcibly called to her attention the striking contrast between the undressing habits of a very bright eighteen-months-old child and a very defective child of almost six years. One could only speculate as to how much the dressing retardation of the latter was due to improper training and how much to lack of intelligence and lack of desire for self-help. The writer was a dinner guest in the home of the younger of these two children. The child, of course, had his supper before the adults dined. His mother then unbuttoned the buttons across the back of his suit and his underwear and untied the knots in his shoelaces. Then she said: "Now you can finish in your room. When you are all ready, you can call me, and I'll come in and say 'good night' to you." The child went happily off to his own room. A little later he called, and the writer was invited to go in to say "good night" also. Afterward, in the living room, a little questioning of the mother brought out the fact that the following routine had been developed and was being joyously followed by the eighteen-months-old. He was able to unfasten the front buttons (large ones, of course) for himself. He would then pull off his suit and his underwear and hang them up on a very small clothes tree, which was one of his prized possessions. Next he would sit down on a low chair and pull off his right shoe (his right shoe was the one "next to mummy's door") and put it down on the right side of his chair. He would then pull off his right stocking or sock and tuck it into his right shoe. Next, off came the left shoe, and it was placed on the left side of the chair. Into it was placed the left sock. Then he went to his little clothes tree and pulled down his night clothes. These were laid down on the floor "openside up." He would then lie down on the floor, stick first one leg into his night clothes and then the other leg. He would put one arm in first and then the other arm. When he got up, his sleeper was on, ready for mother to button. The mother assured me that this unusual skill had been developed very easily by isolating the various steps and, as mentioned so many times before, by giving a name to each part or process. "First we pull this arm out of the sleeve. That's right. Now we pull this arm out of the sleeve. That's right," and so on. She assured me that the dressing process in the morning was on the way toward speedy accomplishment likewise.

A few days later, the mother of the six-year-old referred to above called the writer on the telephone. She complained that the child had been in kindergarten for a short time the year before, but was "too young for it"; so she had been taken out. This year she had tried it again, but while the child had liked school somewhat better, she still cried a great deal and did not get along with the other children (or, as the mother put it, "The other children do not get along well with Marion"). The mother had suggested to the kindergarten teacher that, since Marion would be six at the opening of school in the autumn, she thought surely Marion would enjoy the work of the first grade better. To the mother's great surprise the kindergarten teacher replied that Marion would not be ready for the first grade. She said that Marion was slower in learning than the other children and that she would be more unhappy, she was sure, in the first grade than she had been in kindergarten. The teacher had further suggested that the mother call a psychologist for an appointment to have the child given "a test to find out what things she can do best and whether kindergarten is the right kind of school for her." One could see that the mother was reluctant to have such an examination made. On the other hand, she felt she could not get her child into the first grade if the kindergarten teacher did not recommend her for promotion. Accordingly, the mother finally asked for an appointment and was given one. The day for the appointment came, but instead of the mother's coming and bringing Marion with her, she called on the telephone to cancel the engagement. She said she had been thinking matters over and knew there was nothing wrong with her child. "For instance," she said, "last night I told her to go on upstairs and get ready for bed and that I would come up later and help her finish. And do you know, I found she had taken off her dress herself and had one shoe off and was trying to clean her teeth!" That performance at age *six* was in striking contrast to the behavior of the eighteen-months-old a few nights before!

A case observed by the writer recently indicates the necessity of calling attention again to the fact that sometimes it may be better to *break the rules*. A four-year-old acquaintance was being put through the prescribed paces of learning to help himself. When he came home from play school at noon, the zipper of his snow suit was started for him. He was then supposed to finish zipping, get out of his suit, and get ready for lunch. During this learning process, a violent repulsion to the whole thing arose in the child for a reason which was never discovered. He would refuse, cry, and work himself into such an emotional state that his undigested lunch interfered with his nap. This went on until the mother was advised to forget all about the child's learning to undress himself *for the time being*. Here, as in many similar cases, time worked wonders. After a short period in which no point was made of the matter, the child began to work at taking off his snow suit himself. Then, at least with the mother's help in removing and hanging up the suit, lunch was peaceful as well as the nap. The learning process is sometimes pushed a little *too early* and *too fast*.

The choice of clothes for, and later by, children is of extreme importance. This is scarcely the place to go into details as to the type of shoe to be worn or the styles of clothes most appropriate. Suffice it to say that comfort; absence of pressure, friction, or pulling; freedom of movement; provision for ample and rapid growth are all essential. Doctors are telling us now that stockings that are too short may actually be as much to blame for misshapen feet as shoes that are too small.

Perhaps one of the most hopeful changes of the last few years in regard to the rearing of children is the popularizing of overalls, rompers, sun suits, and snow suits. All these allow freedom to play when, where, and how the child wishes, without too much danger of hurting the feelings of overmeticulous grown-ups.

Mothers are constantly raising the question as to whether children should be allowed to choose the clothes they are to wear on a certain occasion. The answer is certainly "yes," whenever possible, *provided* training goes along apace. "Yes, we wear a play suit to play in. The blue one? All right, the blue play suit to play in." "Yes, we wear that suit when we play and this suit when we go out for a ride. The red one for our ride? Yes, certainly, if you like, the red suit today." Such training begun in the preschool years will reap gracious fruit in adolescence. Personal preference does not mean allowing a child to choose a white dimity to wear to the beach or the sand pile. That is poor teaching. It does mean, however, that as soon as possible the child's taste in clothes, just as in foods, should be broadened and directed.

In this connection it is interesting to speculate upon the psychology of the mother who continually dresses her little girl—or boy, for that matter—in furs and laces and ribbons and feathers. It would take us too far afield to go into detail as to the possible motivation for such action on the part of the mother—deprived youth of her own; desire to compensate for lacks in other fields, such as social standing or intelligence; disagreement between husband and wife; device for controlling a negativistic child who can be satisfied only by the possession of more and more things; desire to keep a child a helpless baby; desire to make a boy look and act like a girl; and so on. One can only feel sorry for the child and hope that a psychiatrist, perhaps with help from some wise teacher, social worker, nurse, or neighbor, can somehow someday lead the mother to see the light.

Many parents very early begin with their children a system of budgeting by which the child's allowance is enlarged to include the purchase of, let us say, stockings. Gradually the list is extended and the budget is increased until the child is buying and paying for practically all his own wardrobe out of his own allowance. Mistakes are sometimes made, and sometimes parents are called upon for advice; sometimes family councils are held, but the learning process goes on apace.

It is a matter of unending wonderment that mothers have been willing for ages to let themselves in for so much trouble in regard to the place where clothes may be found. Many a mother will sit down in the living room in the evening and help her child undress. The stockings and clothes are allowed to fall on the floor, and the child is sent off to bed. Sooner or later it becomes necessary to get the clothes out of the way; the mother picks them up and sticks them *some* place. The next time the child is to wear the clothes, the whole family has to join in the hunt for them. Infinite time and patience could be saved by undressing the child in his own room and by putting his clothes away at the time they are taken off. Everyone has known families in which no member ever knows whether his clothes are upstairs or down! Indeed, there are disorganized families where there is no regularity even in sleeping arrangements, and the children actually have to ask where they are to sleep!

Good training principles would dictate that children should, from the very beginning, be provided with hooks which they can reach and drawers which they can pull out. Then they should be expected to hang up and put away their own clothes. Nursery school practice gives every child a symbol on a sticker—a butterfly, a kitten, a flower, or what-not. Each child's toothbrush hook is indicated by his individual sticker. His towel hook is likewise so marked. His coat hook and the locker for his cot or blanket are also stamped with his own indicator. Needless to say, these containers are all made to scale so that the child can reach and use them with ease.

There is a worrisome habit in regard to dressing that sooner or later arises in the lives of most children. This is the matter of dawdling over dressing. In the first stages of learning to dress and undress, there is considerable novelty and challenge, just as there is in the first permissions to help wash the dishes. After the process is mastered, there are no more worlds to conquer and the novelty has turned into routine; then the struggle usually develops. "Billy will not get downstairs in time for breakfast in the morning. He gets up all right and begins to dress. What on earth he does with his time from then on I cannot imagine." Variations of this theme are heard in most households the country over. With children in whom the dressing skills are not yet perfected, the first temptation to dawdle comes when the buttons are reached which cannot be reached, to use a paradoxical expression, or when the untipped shoelace cannot be pulled by its frayed edges through the shoe eyelet. A little help at these points of difficulty is surely worth while.

Unfortunately, these cases still do not account for all the dressing dawdlers. A ten-year-old friend of the writer would have to be called repeatedly to hurry for his breakfast. Occasionally, his mother would go upstairs to see what was holding up the dressing process. There she might find her son sitting on the side of the bed all dressed but for one shoe which he would be holding in his hand while he looked out the window. She would usually be met by some such remark as: "You know, mother, I have just been thinking. I believe I'll change those old pigeons and put them over into the larger coop and put the new ones into the small coop down in the corner." Dressing had no interest that could compete with an intellectual problem for that boy! Who can say whether anyone will ever be clever enough to change his habits and his personality until experience itself teaches him that it pays to get the routine necessities attended to first!

Washing Habits

As for washing and bathing habits, we should hope that eventually each child would become proficient in the required skills; that he would know intellectually the necessity and beauty of hygienic living; that he would also come to *enjoy the feel* of a clean body; and that he would not be selfish in securing such pleasures for himself. The required training will involve opportunity for early use of wash cloth and towel; some authorities say as early as one year. Parents will need patience at this point, for the child's first efforts will incur splashed water and suds and plenty of high-water marks. Of course, it is infinitely easier, for the time being, for the mother to perform these tasks herself, but by such a procedure the child is not learning self-help and independence. Most children at from a year and a half to two years can, with a little help, quickly learn the essentials of washing their hands and face. At the same time, or before, they are learning always to wash hands after going to the toilet and before eating. The toilets and wash basins in many nursery schools are of miniature size. Even in our homes each child can be provided with a box or stool that makes it possible for him to use the equipment comfortably and safely. Certainly it is not asking too much to insist that each child be provided with his own wash cloth, towel, toothbrush, and containers for these articles. It is usually not poverty so much as lack of interest that deters parents in this regard. Soon the child is ready for the further steps of cleaning out his own basin and tub in order to leave them in good condition for others.

In this chapter, we have considered a relatively small number of habits—eating, toileting, sleeping, dressing, washing, and bathing. It is interesting to speculate as to just how different society would be in two or three generations if desirable habits and attitudes in these areas were instilled into our children.

Social Maturity and Habit Formation

Dr. Doll has devised a scale known as the Vineland Social Maturity Scale (80). The instrument has been found to be useful by psychologists and social workers particularly, both as a measuring and as an interviewing device. Among the features listed as to be expected at various stages of social maturity are many of the matters which we have just been considering. A few examples follow: During the first year, the child drinks from cup or glass assisted, does not drool; during the second year, masticates food, pulls off socks, drinks from cup or glass unassisted, eats with spoon, discriminates edible substances, unwraps candy; third year, asks to go to toilet, removes coat or dress, eats with fork, gets drink unassisted, dries own hands, puts on coat or dress unassisted; fourth year, buttons coat or dress, washes hands unaided; fifth year, cares for self at toilet, washes face unassisted, dresses self except for tying, goes to bed unassisted; eighth year, uses table knife for cutting, combs or brushes hair; year nine, bathes self unaided; year ten, cares for self at table, makes minor purchases; years twelve through fifteen, exercises complete care of dress, buys own clothing accessories; year fifteen through eighteen, has own spending money, buys all own clothing; and years eighteen through twenty, looks after own health, controls own major expenditures.[1]

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CHAPTER VII

THE CHILD AND HIS HOME

The Importance of the Subject

To a serious student of child psychology, it may seem like a faulty sense of balance to devote only *one chapter* to the *home* as it affects the child. The matter is so important, so far-reaching, so subtle, and so inadequately studied that one is tempted to omit such a chapter entirely for fear of its too obvious shortcomings. The literature in this field is so extensive that it is impossible to select a bibliography suitable in length for such a volume as this without omitting many equally valuable references.

Personal Recollections

A good way to begin the study of the effects of home life upon a child is to reduce the question to personal terms. The reader might with profit try to recall as clearly as possible his own living conditions, habits, and behavior at some early age, for example, age five. These very early recollections will, of course, be few in number. However, it is interesting to speculate upon the behavior trends that may have been in evidence at that age, and to ask oneself to what degree they could have been, or have been, changed by later circumstances. The probable effect of recalling incidents from one's early life will be to impress one with the great influence that family ties and family training exert throughout life. This is also true, of course, in cases where the home is a substitute or foster home. Any interested and intelligent adult can look back over his own life and see many direct and indirect effects of parental attitudes and of sibling relationships. It is small wonder that so many autobiographical books are written. Once one becomes absorbed in a consideration of the influences that have played around him and have shaped his life, it is almost impossible *not* to record such impressions, if not on paper, at least by word of mouth to one's friends.

Illustrative Quotations

Notice the grip and compare the outcomes of the following life incidents:

> Margaret locked the door again. At least she had a door that would lock. That was her one consolation in this house. . . . The folks had not believed her. . . . She had never really belonged to her family, and now she wasn't going to pretend at all any more. . . . Margaret had heard Mamma, years ago, saying how she was so dark and Dorothy was so fair—she had heard that and had never forgotten it. That had given her some reason for thinking that she might be adopted.[1] (96)
>
> I was born three days after Dad landed in France, and three years later I cried because this strange new person who had come home from overseas was kissing my mother. I cried and perhaps, figuratively speaking, I have been crying ever since, because he is a strange man. "Strange"—that is the word. We do not really know each other; we cannot see through or break through the other's inhibited self. May something, someday, introduce us to the beautiful understanding companionship that till now we have only glimpsed.[2] (117)
>
> As I remember my own childhood, I think nothing helped so much as what I saw call out the unfeigned and spontaneous enthusiasm of my elders. When they glowed, crackled, or exploded with delight over a book read aloud, over someone's bravery, over a fern, after a piece of music, over a promise maintained in difficulties, and were not aware of my presence or trying to set me an example, then I inwardly and almost unconsciously marked and was marked by the action of reality.[3] (17)

The Home and Juvenile Delinquency

In a previous chapter we discussed some of the devastating effects that war has upon the home even in countries that are not under fire. The absence of the parents, in military service and in industry, loosens the restraints and the supervision, as well as the companionship and affection bestowed upon children. To what extent these factors are responsible for what appears to be a current increase in juvenile delinquency after war is hard to determine.

Although a discussion of juvenile delinquency as such does not belong at this point, it may be noted here that the role of the home as a contributing factor has been strongly emphasized by such authorities as Burt in England and Healy and Bronner in the United States. Writers on the subject have even attempted to give mathematical weight to the home and various other factors contributing to juvenile delinquency. In studying 823 juvenile recidivists, Healy (46) found that defective home conditions were the main factor contributing to repeated delinquency in 20 per cent of the cases and a minor factor in 48 per cent, making 68 per cent in all in which home conditions played a role. Burt (16) made an intensive personal study of 200 consecutive cases of juvenile delinquents. In order to evaluate the causal factors of their delinquency properly, Burt compared these youthful offenders with 400 non-delinquent children "of the same age, of the same social class, living usually in the same street and attending the same school." After making many detailed comparisons of the two groups, Burt says: ". . . one main conclusion can be drawn. It is clear that *the commonest and the most disastrous conditions are those that center about the family life.*"

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[1] From *The Folks,* by Ruth Suckow, copyright, 1934, and reprinted by permission of Farrar & Rinehart, Inc., publishers.

[2] From *College Themes,* by permission of Dr. Don M. Wolfe.

[3] From Richard Cabot's *What Men Live By,* by permission of Houghton Mifflin Co., publishers.

These attempts to *measure* subtleties such as parent-child relationships obviously do little more than show trends and directions. When one observes *individual* children, one is tempted to wonder whether 100 per cent is not nearer the figure representative of home influence. Where there are intelligence, emotional stability, understanding, sympathy, and security in the home, how much do detrimental outside influences affect the child?

The question of the effects of family relationships upon a child becomes very involved when we realize that the sum total of home influences will affect one child in the family in one way and another child in the same family in a very different way. This has been brought out clearly in an investigation by Healy and Bronner (47). The research was an attempt to reach down into the family life of repeated delinquents. Cases were chosen for study for which a non-delinquent sibling could act as a control. A comparative study of the emotional life and of the behavior of the delinquent and the non-delinquent siblings convinced Healy and Bronner that delinquency *per se* must be considered as a way of expressing oneself when accepted ways of so doing have been blocked by unsatisfying human relationships. "It appears that at some varying distance upstream in the sequence of delinquent causation there are almost always deeply felt discomforts arising from unsatisfying human relationships."[4] The delinquent sibling is described as "the one who at some stage of his development had been blocked in his needs for satisfying relationships in his family circle."[4] As to a preventive program, Healy and Bronner say: "We are inclined to believe that the single direct attack of greatest value may be through widespread parental education—to be sure not an easy task."[4]

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[4] From William Healy and Augusta Bronner's *New Light on Delinquency and Its Treatment,* by permission of Yale University Press, publishers.

Parent Education

As a result of such findings as those just mentioned and other influences described in connection with our consideration of preschool children, there has arisen in this country a great movement of parent education. It has been referred to as an *American folkway,* since in no other country in the world have such organization, literature, and research been developed for parent education as in America. Reference to such works as (24), (73), and (101) will give some idea of the extent of this relatively new endeavor. Although the movement has been of inestimable worth and certainly must be continued, it has not been without its shortcomings. Americans, with their characteristic vehemence, have rushed into training programs for parent-education leaders with a speed that would no doubt dumbfound slower-moving European educators. In some instances, unwise judgments have been pronounced by lay leaders who had derived most of their knowledge on points of child rearing and parent-child relationships from reading. A second possible weak point in this powerful educational movement is the fact that, like so many other good programs, it does not, on the one hand, sufficiently reach those who need it the most and, on the other hand, may too greatly influence overly conscientious parents. The parents with whom case workers have to deal do not, as a rule, belong to any mothers' club or parent-teacher organization. On the other hand, the parent who takes parenthood seriously is likely to feel that he or she must not miss any opportunity for the "newer education." He or she is therefore likely to attend meetings, read books, and seek professional advice *ad infinitum,* to the point of losing his or her own individuality, to say nothing of losing the "light touch" which is so essential in the handling of children. The movement has even reached the joke column of the newspapers: witness the story about the baby who was being reared *by a book* and nearly died of a misprint. It is a common experience for a psychologist, psychiatrist, or mental hygienist to go home after having addressed a group of parents, saying to himself: "*There* is a mother that I paralyzed. She was so impressed with some of the case material that I cited that she is going to think everything she is doing is wrong." Just as it is true that no parent does things 100 per cent right, so it is probably also true that no parent does things 100 per cent wrong. Parents need encouragement and confidence, as well as information and training.

"Good" and "Poor" Homes

The case worker is very familiar with a common misapprehension in regard to home influences. The uninformed usually think that, from the standpoint of child rearing, homes are either good or bad. According to this conception, the good home is the one where education, money, morality, physical comforts, and perhaps religion are found. The bad home, by the same token, is supposed to be one of poverty, abuse, ignorance, or immorality. So long as such a conception exists, it is hard for the laity to comprehend why children from so-called good homes "go wrong." The mind of the inexperienced simply cannot understand when a child from an "honest family" steals, or when a "minister's son" runs away from home, or when the girl "on the avenue" goes to a comparative stranger for help when she finds herself in difficulty. Similarly, many who disapprove of, let us say, sex irregularities or social drinking, are quite unable to understand that parents with such habits could be good parents in *any* particular. A book of fiction (62) depicts life in the home of a prostitute. The love existing between the mother and the children in this home was a beautiful thing, undesirable as other influences were. Lest there be any misunderstanding on the point, it may be well to put the matter this way: A home is not a good home for children unless it provides, in addition to physical, moral, and social advantages, *love, sympathetic intimacy, emotional security,* and *opportunity for growth.* Conversely, a home is not altogether a bad place for child rearing if it does provide these latter factors. *A Tree Grows in Brooklyn* illustrates the latter point.

Effects of Economic Status of the Home

Some parents on relief would probably be surprised to discover that families of wealth may have difficulties in rearing their children (7, 21). A study by Levy (61) on 700 cases of problem children showed that, in this group at least, although delinquency was greater among poorer children, personality and emotional difficulties were greater among the rich children. Melzer (67) interviewed 76 boys and 74 girls from three different economic groups. By the technique of "loud thinking," each child was asked to speak out the first ten ideas that came to his mind when he thought of his father and of his mother. In this way, 1,000 child reactions were secured from each of the three economic groups. After examining and analyzing these replies, Melzer says:

> On practically all attitudes which are interpreted as indicators of mental health or which in other ways are conducive to balanced personality development, the children from the middle-class parents rank first, the children from the highest economic level studied rank second, and the children of the poorest rank last.[5]

Melzer's findings do not agree entirely with those of Ulton (102), who found not only that more economically favored parents dealt more intelligently with their children, but also that their children had fewer problems than those of the two lower economic groups. In fact, the children of the lowest income group were shown to be more poorly integrated than the children of either of the other two groups. Pisula (74) studied fifty children referred to a guidance clinic from homes of high socio-economic status and compared them with a control group from economically deprived homes. The children from the more comfortable homes "showed more school maladjustments, more problems based on 'submissive' traits, fewer problems based on 'aggressive' traits, and about an equal number of 'faulty habit' problems."

Such discrepancies in findings probably indicate one or both of the following two possibilities. Obviously all "rich" children are not alike, nor are their parents. The situation is similar in other economic groups. It is, therefore, doubtful whether anyone will ever be able to generalize about rich children *as a class* or poor children *as a class.* Certainly studies of a few hundred from a class will not tell us the whole story. It is easy to see, therefore, why such studies as the aforementioned may give us the truth as regards the particular groups studied and yet fail to permit generalizations. *Secondly,* it is safe to say that the effects of poverty or riches will affect different individuals differently. A parent may hide his financial worries from his child. What is the result? One child under such circumstances may go on blithely ignorant of, and therefore unaffected by, the economic problem. Another child under the same circumstances may sense a difficulty, worry about it, and feel a gap between himself and the parent who does not confide in him. Other parents sometimes use economic deprivation as a threat and constantly raise the issue of parental sacrifice. Such behavior will likewise affect different children in different ways. It is doubtful, therefore, whether we shall ever be able to separate out the personality and emotional problems of children from different economic groups and generalize therefrom unless we can also segregate out parental attitudes and methods of child rearing.

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[5] From H. Melzer, *Economic Security and Children's Attitudes to Parents,* by permission of Dr. Lawson Lowrey, ed. of *Amer. J. Orthopsychiatry.*

The parental anxiety that is engendered by poverty, together with possible malnutrition and overcrowding, will in many cases cause psychic wounds. The writer once said to an intelligent adolescent girl committed to a training school for delinquents, "Margaret, if you could do or be the thing you would most desire, what would you choose?" With serious voice she replied, "Be where there are no fights or arguments and everybody has a job." On the other hand, the child in a home of riches has little better chance if parents are continually away from home or if the only way they know to cure a heartache is to proffer money, new clothes, or a "trip somewhere." Fortunately, neither all poor homes nor all rich homes are devastating to morale.

Love of Parents for Their Children

Another popular misconception, which professional workers constantly face, is the old notion that every mother loves her child. To assert differently would produce incredulity in many persons. It is probably no easier for some mothers to recognize this fact, or to *admit* it, than it is for some child-rejecting mothers to experience maternal love. Let us examine parent-love in the light of modern research. We shall consider five possibilities, although the five may not be mutually exclusive (9, 31, 54, 71, 72, 86, 116).

Ambivalence. It is perhaps safe to say that as a rule, for both fathers and mothers, there are times when being a parent is irksome or anxiety-producing. Although some parents superficially would resent such a statement, there need be no doubt nor, for that matter, shame about the fact. It is hard to think of any desired object or any pleasure-giving situation in life that does not under some circumstances become tinged with negative feelings. Parenthood is no exception. The *finest* parents in the world at times experience ambivalent feelings toward their children; that is to say, they have love and acceptance feelings colored with mild hate or rejection feelings. Since parents are psychological organisms themselves, this *must* be true. No doubt many husbands and wives during the war had some ambivalent feelings about a child to be born while the husband was in the Army or Navy. Child rearing, from the standpoint of mental hygiene, becomes easier when parents accept this fact and act accordingly. The seriousness of ambivalence probably is determined by its degree. In extreme amounts, it makes for inconsistency and unpredictability in discipline. In moderate amounts, it is found in the type of home next to be considered.

Balanced love. In order to avoid hysteria or pessimism over the fact of ambivalent parental feelings, let us consider a home where there exists what we might call *balanced love.* Such a home has love between parent and child. That is the first step. Beyond that point, balanced love accepts differences in parent-child points of view, with all the attendant irritations. Balanced love realizes that there are two sides to such situations, and handles them so that growth ensues for both parent and child, thereby establishing constructive relationships. Cunningham (26) cites the case of a family who call such situations "head-ons," and says, "When both child and adult admit the 'head-on' the problem of the moment is usually more than half solved." Parents possessed of and by balanced love see both the good and the wrong in their children. Their praise and their punishment are tempered with thought for further growth. The children in such homes soon learn "what gets spanked and what gets kissed" and have every reason to believe that there is a predictable certainty about such treatment. They also learn early that when they find themselves in difficulty the best thing to do is to go immediately to their parents. Such homes conform to the prize-winning definition, "the place where our stomachs get three square meals a day and our hearts a thousand."

Rejection. In contrast to this picture, as every case worker knows only too well, are the homes where no attempt is made by the parents to cover their indifference or their hostility to their children (70, 116). Juvenile court and clinic records are filled with such cases. The writer once worked with a four-year-old who, for punishment, had been locked by her mother in a dark closet with a rat. This mother had always referred to her child as "it." Many mothers abandon their children completely. Lesser degrees of rejection are, unfortunately, altogether too common. Professional workers not infrequently encounter mothers who refuse to nurse their babies. Sometimes a mother refuses to name her baby or even to see it.

A valuable study is going forward now under the direction of Dr. Margaret E. Fries (34). By interviews and psychotherapy, when necessary, Dr. Fries begins her study with both parents before the child is born. Moving pictures, charts, and detailed records are among the accumulating data which Dr. Fries plans to collect through the adolescence of the subjects who are now infants. Pertinent to our present discussion are the findings (and pictures) which Dr. Fries has of some rejecting mothers. Even the way in which the mother holds her baby while nursing is seen to be an indicator of rejection in some of the cases studied. Dr. Fries says (34)[6]: "I consider the parent-child relationship as the most important single factor in character formation." In Aichorn's *Wayward Youth* (3), he says of his delinquents: "Most of these young people have never had their infantile need for affection satisfied. They have never experienced the happiness of a close relationship to the mother. They need love." He goes on to say that almost without exception these were cases "where the home situation was disturbed, broken up, or disharmonious."

In many instances, the birth of a child is unwelcome and the mother may not hesitate to say so. Although this is not always true of children born out of wedlock, it frequently is so. Sometimes the father rejects the child when the child's birth has occasioned the death of the mother. Newell (72) studied 75 children where there was "a definite statement by the mother that the birth of the child was unwelcome." Newell's conclusions, after contrasting these children with a control group of 82 children, are as follows:

> The rejection is primarily due to the mother's unhappy adjustment to marriage. This in turn is usually a result of immaturity and emotional instability on the part of one or both parents. The mother's handling is most frequently inconsistent, wavering between over-protective and hostile behavior.[7]

The children in turn, according to Newell, showed a

> . . . mixture of aggressive, anti-social as well as submissive, neurotic symptoms. In addition it was found that aggressive behavior occurred more frequently when the parental handling was consistently hostile, while submissive behavior occurred more frequently when the parental handling was consistently protective.[7]

As will be shown in the following paragraphs, there may be overprotective behavior in the same individual who is actually rejecting the child.

Ribble (82) has recently strongly urged a return to some of the old-fashioned practices of rocking the baby, stroking its head, singing, and, of course, breast feeding. She feels that the separation period common in most hospitals during the lying-in period is definitely bad for the baby and "predisposes these sensitive babies to anxiety." Unrestricted sucking and nursing, she believes, causes infants to focus their eyes earlier, grasp for objects earlier, vocalize and talk earlier, and have a higher degree of alertness. Whether or not one is satisfied with Dr. Ribble's physiological explanation for her observations and conclusions about babies, one cannot but accept the fact that a loved infant probably responds *generally* on a higher physiological level than he would do if he were denied fondling and other evidences of emotional warmth.

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[6] From Margaret E. Fries, *Factors in Character Development, Neuroses, Psychoses, and Delinquency*, by permission of Dr. Lawson Lowrey, ed. *Amer. J. Orthopsychiatry.*

[7] From H. W. Newell, *A Further Study of Maternal Rejection,* by permission of Dr. Lawson Lowrey, ed. *Amer. J. Orthopsychiatry.*

Further evidence of the effects of parental rejection upon the child are shown by Childers (25) in his study of children who are hyperactive. Childers concludes that the group studied by him had great feelings of emotional insecurity in regard to their own homes. "It has been impressed upon us that many of them come from homes in which even they have been aware for a long time they have not been wanted." Figge (86) also found that rejected children were more often referred to clinics because of aggressive and rebellious behavior than was true of non-rejected children who were also referred for treatment. Bender and others (12) studied aggressiveness in children. They say:

> In general, it seems that the withdrawal of love increases aggressive tendencies in children. . . . Aggressiveness on an organic basis is mostly more diffuse, whereas psychic traumas lead to an aggressiveness in relation to specific situations.

Bender (10) has also made an interesting comparison between the behavior of children denied parental love on the one hand and children suffering from head injuries and encephalitis on the other hand. She says:

> Of great interest is the fact that personality deviations as severe as any of these we have described may develop in a child who has had no birth injury, skull fracture, or encephalitis but who has been deprived of the normal family-social life at the critical period in life, which is the pre-school age. . . . Such a child is always emotionally infantile, always craving the love of the mother it never had and is insatiable in his demands for attention, grasping and clinging psychically. . . . He is restless and has marked hyperkinesis. . . . Neurological deviations are usually absent, but motility mannerisms may so closely resemble them that at times they are confusing to the examiner.[8]

In light of such evidence, it would appear that overactivity, aggressiveness, or delinquency is not always explainable on the basis of inherent willfulness, brain injury, chorea, epilepsy, or the other ordinarily assigned causes. Adequate investigation in all such cases should *begin* with relationships within the home.

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[8] From Lauretta Bender, *Anatomopathological Data on Personality Function,* by permission of Dr. Clarence B. Farrar, ed. of the *American Journal of Psychiatry.*

Overprotection. We have so far mentioned three types of affectional reactions of parents toward their children: the ambivalent, the balanced, and the obviously rejecting. Two more must be considered. There is the home in which one or both parents are too affectionate, too demonstrative, too willing to gratify every whim of the child, and too anxious to keep the child dependent upon the parent (58). Such cases may occur when the parent has experienced deprivation in his or her own childhood, when a child was long wanted in the family, when another child has been lost by death, when the child is an emotional substitute for either a deceased or an uncongenial mate, or when the parents have married late in life. A mother under such circumstance may be a veritable vampire who sucks the life blood out of her child. The child may not be given an opportunity to compete with other children, to undergo any reasonable hardships, or to develop independence of thought or action. Love is not tempered with restraining judgment. The typical apron-string child of literature and drama may be the result.

Disguised rejection. Still another type of parent-child relationship is that which *appears* as great love and overprotection but which in reality is a disguise for parental rejection. Current literature is filled with studies on causes and results of parental rejection, which masks itself with too great care and solicitude. Caution is needed at this point to avoid the mistake of thinking, however, that *all* overprotection is disguised rejection. Such a generalization is quite unsafe.

As was mentioned in an earlier chapter, much is being done today for those husbands and wives who devoutly wish for children but have not had any. Sterility clinics have made parenthood possible for many such couples (41).

Studies on the Effects of Parental Attitudes

The Smith College School for Social Work has published many studies on questions relating to parents' attitudes toward their children, some being more recent than the ones mentioned here (86, 105). FitzSimons (30), who also studied parent-child relationships, emphasizes a point that all case workers appreciate, namely, that behavior-problem children must be studied in relation to the attitudes of *both* parents. Of the children whom she studied, those who encountered negative attitudes on the part of both parents showed the largest number of aggressive problems per child. Enuresis was found more commonly among the children both of whose parents showed rejecting attitudes. Fitz-Simons points out that, if this finding is confirmed by other research, the limitation of the child's intake of water by the parents in an effort to prevent enuresis may actually make matters worse since it implies one more deprivation. Nail-biting was found to be common among those children one of whose parents showed an acceptance of the child and the other, rejection. Viets (105) has also shown that nail-biting accompanies tension in the home.

MacDonald (64) has reported on eight seriously and criminally aggressive boys. Interestingly enough, each of these boys is reported to behave like a "perfect little gentleman" in the presence of one or two adults, among girls, or when helping the mother or grandmother with the housework. It is when they are in the presence of several men or boys that their attacking behavior manifests itself. Fear of their own physical inferiority and of attack by others characterizes them. MacDonald stresses the fact that not one of these boys has had a satisfactory relationship with his own father or with a father substitute. Instead, their lives have been spent "under the influence of aggressive, rejecting, punitive women with opportunities for parental identification overbalanced on the maternal side."

To recapitulate, even though the categories are somewhat artificial and oversimplified, there may be value in realizing that there are at least five types of parental affectional attitudes: ambivalent, balanced, rejecting, overprotective caused by positive factors, and overprotective that is a disguise and compensation for parental rejection.

Measurement of Parents' Attitudes

In an interesting series of studies, Stogdill (90, 91, 92, 93) has attempted to measure parents' attitudes toward their own methods of control and toward children's behavior. Altogether, in these studies, the parents appear to be a rather repressive lot. They approve of *some* freedom for children, but under control so strict that freedom practically disappears. In comparing psychologists' ratings on the same points, Stogdill concludes that parents tend to favor more introvert behavior and psychologists tend to favor more extrovert behavior. In other words, parents are seriously concerned over breaches of discipline and moral taboos, but psychologists are more concerned about indications of emotional maladjustment. Stogdill also points out (92) that many of the unwholesome and repressive attitudes of the parents studied seem to be associated with religious, social, and economic conservatism and with educational and socio-economic deprivation.

Stogdill (91) carried his study one step further to determine what parents think about *parents'* behavior. Parents and child guidance authorities were asked to rate sixty items of adult behavior on the basis of how seriously it affects the child concerned. These two groups of raters *agreed* that the adult behavior which discourages the child or undermines his self-confidence and security is the worst kind of behavior from the standpoint of the child's mental hygiene. However, the two groups of raters *disagreed* inasmuch as the parents felt adult behavior that allowed the child freedom from moral repression was the worst of the items mentioned, while the guidance experts felt that adult behavior which makes the child lose confidence in human beings is the worst. More recently Gardner (35) has studied the attitudes of fathers.

Parental Attitudes and Therapeutic Outcomes

From the standpoint of the professional worker, the effect of parental attitudes upon therapeutic outcomes is of utmost significance. The visiting teacher is no wonder-worker, nor is the case worker or the public health nurse. If children remain in homes where parental coöperation cannot be secured on therapeutic programs, beneficial results are curtailed, of course. When one or both of the parents dislike or reject the child, they are not likely to make much effort to coöperate with remedial plans. For that matter, excessive affection is no guarantee of coöperation. In fairness to parents, however, it must be said that very often failure or inability to work along on a therapeutic program is an indication of, and result of, the need for help on their *own* emotional problems. The skilled professional worker often senses that what the mother really wants to talk about is not the child but herself. Very often, a large number of interviews may have to be devoted to a discussion by the mother of her own problems. As her own difficulties clear up through her contact with the consultant, the mother usually begins to see her child's problems in a very different light. Many times the chief cause for difficulties with the child are the mother's own unsolved emotional disturbances. Interesting investigations on the approach to the parent, interviews with the parent, and therapeutic outcomes as determined by parental attitudes may be found in the following references: 1, 5, 48, 52, 54, 69, 83, 114, 116.

A consideration of parental attitudes impresses upon us at least three points. In the first place, there is accumulating evidence that all manner of behavior deviations can be and often are accounted for by the subtleties of home relationships. As a result, clinical approach to personality problems and to the delinquencies of children has taken a decided turn within recent years. Obvious and external causes are not to be overlooked, of course, and must always be taken into account. Fortunately, however, better devices for unearthing unfortunate *relationships* are becoming available, as suggested in the studies already referred to and in some yet to be mentioned. Attempts at re-education of problem children in the future will of necessity pay more and more attention to relationships within the home. At this point, one is also impressed anew with the necessity for pre-parental education. Someway, somehow, we must devise means to teach parents some of the psychological subtleties of child rearing without such hazardous experimentation after their children are born (27, 80, 87).

Another fact of great significance is that, in attempting rehabilitation and re-education, professional workers take into account that parents' attitudes (and in large measure also, teachers' attitudes) tend to be somewhat opposed to the attitudes of child guidance experts. Increasingly we shall come to see that this difference of opinion must somehow be resolved in each individual case before we can get adequate coöperation with parents and teachers and before we can do what we should like to do for the child.

Since the coöperation of parents is of such significance in bringing about improvement of children through treatment, a third important point arises. On the one hand, some agencies, clinics, and schools have undoubtedly wasted time in attempting to produce changes in children when they were unable to secure any parental coöperation whatsoever. On the other hand, there are clinics and agencies that refuse to carry a case at all unless the parents rather early in treatment are willing to coöperate with superimposed plans and theories. *In the meantime,* the child bears the brunt of the impact. It would appear that, if children are not to suffer, one of two or three things must happen. As time goes on, let us hope that we will learn *how* to secure parental coöperation. There is undoubtedly much more that we can do in this matter than we are now able to do. *Or,* if we are not subtle enough or clever enough to secure parental coöperation, then perhaps we will *either* have to put the child some place where better plans *can* be carried out or else we may have to do more with and for the child *ourselves.* These last suggestions are somewhat vague and perhaps somewhat drastic. The point is that the law *enforces* vaccination for public-school children whether the parents coöperate or not, and no one with any intelligence objects. By the same token, agencies qualified to help children must somehow find a way to do so either with or without parental aid. The day will most certainly come when children will be given the best that science and the professions have to offer whether the parents wish it or not.

Parents' Knowledge About Their Children

Our discussion of popular beliefs as to how parents feel toward their children has led us far. We must now consider another popular fallacy, namely, that parents always understand their own children better than anyone else can possibly do. A corollary of this belief is that parents know better than anyone else the factual material in regard to their children. Anyone who does counseling service of any kind knows how fallacious this notion is. Some parents would be most amazed if they knew what their children were telling to "strangers" about their difficulties and about their family life. The fallacy would not be so serious if it did not interfere at times with the giving of help to children by people qualified to do so. As long as the parent thinks he can "handle" the matter better himself, things are likely to rest there. This is not to say, of course, that there are not many times when the parent *is* the one most suited to straighten out matters for a child. The difficulty comes when the unqualified parent still thinks that he is qualified, and when in reality there are many things about his child that he actually does not know.

Only one investigation on the matter of how much parents know about their children will be discussed here. Dr. Eugenie Leonard (57) studied a large number of freshman women at Syracuse University. One feature of the investigation was the securing of information on certain matters pertaining to the freshman women from the students themselves and then the putting of the same question to the mothers of the students. One might have supposed *a priori* that mothers who are sending their daughters away to college would be such a superior group that they would have very accurate information about their daughters, and, furthermore, that the relationships between such mothers and daughters would be very intimate. In this investigation, *"percentage of agreement"* means the percentage of cases in which the mother and the daughter *reported similarly* in answer to the questions about the daughter. Questions about desire to go to college, choice of college, choice of vocation, change in religious beliefs, use of spending money, choice of clothes, homesickness, and many other features of a girl's life were asked of freshman girls and of their mothers. The "percentage of agreement" figures lie between 3 per cent and 98 per cent, nowhere reaching 100 per cent. The closest agreement was found in answer to questions on such factual matter as previous educational experiences and the like. Interestingly enough, the smallest percentage of agreement was found in the daughters' and mothers' answer to the question: "Does your mother object to your choice of clothes?" ("Do you object to your daughter's choice of clothes?") Space does not permit further analysis of the figures. The fact remains, however, that there were evidently many points of significance in the life of these college students upon which they and their mothers either did not see eye to eye or misunderstood each other seriously. If such discrepancies exist in superior homes and with more or less adult daughters, it is quite easy to see what may happen in less intelligent homes or with younger children, who are on less of a maturity par with their parents. Perhaps we might be allowed to paraphrase Shakespeare and say, "It is *only a very wise* father that knows his own child" (99).

Children's Attitudes Toward Their Parents

Correlated with the attitudes of the parents toward the child are the attitudes of the child toward his parents. Some of these will be discussed later. At this point, however, we shall mention only children's parent-preferences. Everyone has seen families in which there was a marked preference between one parent and one child. In some such cases the situation seems to be accepted by everyone concerned, and no great harm appears to result. In other cases, however, such preferences lead to partialities, jealousies, and exclusions. In some families, these preferences change with time, but in some they continue throughout life. Simpson (85) interviewed, by the use of several devices, 50 boys and 50 girls at each year level beginning at age five and going through age nine. These 500 children were studied as to their parent-preferences. Analysis of the data indicates that both sexes, and all but one age group (five-year-old girls), show more mother-preference than father-preference. The mother-preference increases as the age level advances. Whether similar findings would result if another group of 500 children of these ages were studied, no one can say. However, the important thing is perhaps not what *500* children feel or say so much as what any *individual* child feels.

The very significant role that mothers ordinarily play in the lives of their children is nowhere more clearly indicated than in the literature of children's behavior disorders. Hayward (45) found that children report more factors of incompatibility with the mother than with the father. Bender (11) says:

> In general, there are more behavior problems in children of psychotic mothers than of psychotic fathers, because the mother is more essential to the home-life and personality development of the child.

Bender goes on to point out that one class of boys shows a serious behavior disorder when the father is psychotic. This includes those cases where the father has developed paranoidal delusions against the mother. The boy in some of these situations seems to develop a distorted identification and imitation of the father. The result is that the boy is torn between his loyalty and affection for his mother and his identification with his father (68).

Oedipus Complex

Literature on child psychology in relation to home situations is replete with references to the so-called Oedipus Complex in boys and the Electra Complex in girls (31, 49, 53). Current usage seems to prefer the former term, however, as applying to both boys and girls. It is difficult to state the psychoanalytic theories involved in the Oedipus Complex briefly and at the same time fairly. Heidbreder (49) has succeeded in this task so well however, that the following explanation is quoted from her *Seven Psychologies*.[9] She interprets Freud's views on this point as follows:

> From the cradle, the child is in love with his mother; but society sees to it that the sexual interest is neither expressed nor recognized as sexual. Certainly the child's enjoyment of his mother does not proceed without check. For one thing, the father has claims on the mother and is in this respect the child's rival. The outcome is the Oedipus Complex: the child loves his mother and hates his father. It is true, the child may also love his father, in which case his attitude is ambivalent—he both loves and hates the same person. The corresponding complex, developed somewhat differently, is present in the girl; she is in love with her father and either hates her mother or develops an ambivalent attitude toward her. The whole situation, with its violent loves and jealousies, with its inevitable conflicts and repressions, involves an enormous amount of psychic stress and strain that may be the source of endless emotional disorders.

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[9] From Edna Heidbreder, *Seven Psychologies,* by permission of D. Appleton-Century Co., publishers.

Obviously, if one adopts Freud's explanation of the development of the sex life or love life, then he is committed to certain procedures, explanations, and programs of training. A critical point seems to be that statistical evidence does not permit our generalizing that such a scheme of sexual development is universal. In all other phases of child development, there seem to be individual variations, individual short-cuts, retardations, or omissions. Looked at in the light of individual differences, it seems more reasonable to suppose that peculiarities of constitutional disposition, or parental handling, and of domestic regimen would play a larger part in determining children's parent-preferences than the sex instinct *per se*. Although ordinary observation reveals many cases where there seems to be stronger attachment between the child and the parent of the opposite sex, ordinary observation also reveals many cases where, if such a state of affairs exists, it is masked beyond recognition.

Some Causes of Friction in the Home

It is proposed now to mention some of the common causes of friction between parents and children (23, 33, 75). A word of warning, however, is in place. As all professional workers know, there is as great or greater range of individual differences in parents as there is in children. Therefore, all of what we are about to consider is applicable to some parents but not to others. Furthermore, we can mention neither all the fine nor all the reprehensible traits of parents.

Obedience. Perhaps one of the commonest sources of family friction has to do with obedience. The obedience demanded by some parents is of the "because-I-say-so" type. Such parents assume an omniscience as to their knowledge and a Jehovah complex as to their right to be respected. The Lynds in *Middletown* (63) report on one group of business-class mothers and another group of working-class mothers who were asked to rate in importance for child rearing fifteen possible traits. Nearly fifty per cent of both groups rated "strict obedience" as one of the three most important traits. Attempts to enforce blind obedience usually deteriorate into nagging. A school teacher once put on the blackboard the word *grown-ups* and asked her pupils to write a definition of the term. One child wrote, "Grown-ups are people who boss you." Much of the discipline and obedience that we demand of children must appear to them as mere bossing and nagging. A child was once asked what he wished adults would do for little boys. He replied, "Let 'em alone, let 'em alone, goodness sake let 'em alone."

Unreasonable and undeviating demands for obedience to a *person* are responsible for much delinquency and for many other unfortunate outcomes. Such demands are an altogether-too-common reason why delinquents begin to stay away from home. For example, they often say, "I did not know it was so late, honest, and when I saw it was late, I was *afraid* to go home and meet Dad, and so I didn't go home at all." Not going home the first night is, of course, only postponing the evil day, and by the second evening the child may be even more fearful of meeting an irate parent and so may continue to stay away.

Obedience to the letter rather than to the principle keeps a child on an infantile basis. The newspapers carried an account recently of a serious automobile accident in which a fine young lad was maimed for life. The papers did not relate, however, nor did they know the travesty on growing up that was continually practiced in that home. The boy was allowed to take the family car out, but under strict injunctions that he was to be back home "not one minute after twelve o'clock." The usual "unexpected" had happened in the form of a flat tire. Repairing the tire took time which the boy had not allowed for to make the return trip. Knowing his father, he understood that "not one minute after twelve o'clock" meant exactly that. He had tried with almost fatal speed to meet the requirements, but landed instead in a hospital. If for 17 years there had been willingness to listen to reason, on both sides, willingness to believe in right intentions, willingness to act on *principle,* the life story of that young boy would be very different.

The writer recently was consulted about the children of a man occupying a place of great prominence in the community in which he lived. The matter of the relationships between this man and his wife and their children was never fully explored because, for certain reasons of convenience, it seemed better to get help for the children nearer to their own home. Shortly afterward, however, the writer heard that the man was also having difficulty in his public relations. The complaint was that he could give no leadership to those under him. His subordinates charged that he could not take a position on any issue and that no one was ever able to find out what his policies were or whether he had any. At this point there flashed through the mind of the writer a luncheon scene of many years ago when this man was a youth in college. At the luncheon table the man's mother had said with much finality and considerable pride to the women present, "My children have never heard me say I was wrong." When she was asked just what she meant, she went on to explain that one must never allow a child to know or suspect that his parents have erred, for if he does he will lose respect for them! Up to that point, apparently, that mother had made all decisions of "right" or "wrong" for her son. One cannot help wondering the extent to which such training is responsible for the failure in his adult job and in the rearing of his children.

The attempt to enforce letter-perfect obedience extends in some homes to such situations as choice of friends, choice of clothes, amusements, and even vocations. A young man, recently graduated from a professional school, came into the writer's office not long ago. He mentioned that he had made the trip of two or three hundred miles by train. When asked why he had not driven his car, he hesitated, laughed a little, and said, "Oh, when I decided upon my profession a few years ago and went away to professional school, my parents were so angry about my choice that they took away my allowance and my car." Such unreasoning and unreasonable demands for acceptance of parental dictates can be found in all classes of society and in all economic groups.

An equally serious situation is to be found in the *neglecting* type of home, where there is no one who is sufficiently concerned to give supervision. There may be no one to follow through on directions to see that they are carried out. The shortness of memory span and the great suggestibility of children make necessary *some* supervision in order to secure *protective obedience.*

"They treat me like a baby," is a wail that goes up from many a home throughout the country. Even young children resent such an attitude. A six-year-old overheard the mother of her little friend say: "No, you can't do that. You're too little." In sympathy the little guest whispered: "Oh dear! I suffer from that too." The restrictions imposed by parents who are unwilling to face and encourage increasing maturity in their children result in attempts to enforce blind obedience. Money, door keys, and the family car often become the symbols of such parental domination in the lives of adolescents. Those desiring to know how some parents have met these problems with a degree of success will be interested in reading: 40, 78, 79, 88, 94.

Principles underlying obedience and punishment. Parent education is making a valiant effort to develop understanding in the matters of obedience and punishment. No one would wish that parental control and direction should be removed. What we should desire is that they be practiced with somewhat more finesse. Coöperation rather than bossing; not turning a deaf ear; subtlety in getting children to want to do what we want them to do—all help so much! Parent education is striving to make parents realize that they cannot command respect unless they deserve respect. In fact, there are times when some parents should *not* be obeyed. We want parents to learn that obedience should not be to a person but rather to a principle—obedience to *principles of health, growth,* and *safety;* obedience to the *rights of others;* obedience to *such conventionalities as make for better living;* obedience to *all those rules that will ultimately develop self-control and self-determination.* That is about all there is to it.

Punishment. The uninformed parent, whom case workers and teachers frequently meet, may be as unreasonable about punishment as about obedience. Too often punishment is inflicted because the parent is angry and not at all because the parent thinks the punishment will really be *helpful* to the child. Experience of case workers as well as literature in child psychology is filled with examples of punishments inflicted for noise or laughter or romping or other factors that merely interfere with parental comfort. In an investigation (112) about which we shall have more to say in a later chapter, it is shown that teachers and parents react in much the same way. Whenever a child indulges in any behavior that annoys, humiliates, or threatens—in other words, whenever he indulges in *attacking behavior*—an adult has to be almost more than human not to retaliate *in kind.* Attacking or aggressive behavior in children is almost universally met by retaliative, aggressive, and punishing behavior on the part of the adult involved in the situation. Such handling is in no wise an attempt to adopt the procedure that will help the child to grow and learn something from the experience.

Culture conflicts. Another common source of friction between parent and child is that some parents do not realize their children are living under different conditions and in different surroundings than those in which they themselves grew up (23). Many parents make the mistake of thinking that clothing, amusements, social contacts, and what-not should be in the same amount and of the same kind as were deemed good perhaps fifty years ago and perhaps even in a different country. Failure to realize differing demands of differing cultures is a common source of conflict between children in this country and their foreign-born parents. In all manner of homes father is prone to think that what was good enough for him thirty years ago should provide the pattern for his child today. An adolescent in a well-to-do home was heard by his mother one day recounting to his chum some of the tales father had been telling about how *he* used to have to *walk* every place *he* went, et cetera, et cetera, *ad infinitum.* It is too bad that father could not have heard the chum when he sighed, "Do you have to listen to that, too?" The poet Gibran was quite right when he said, "If there is such a thing as sin, some of us commit it backward following our forefather's footsteps and some of us commit it forward by overruling our children." [10]

Respect for children's feelings. Perhaps one of the greatest shortcomings in some parents is their utter inability to remember how it felt to be a child or to put themselves in their child's place. Think of the utter callousness, to say nothing of the inconsistency, of the father who will permit his daughter to go to dances but will not permit her to have a key with which to get into the house when she returns. It is hard to understand the lack of sensitivity of feeling in such a man, who insists on coming down in his bathrobe to unlock the front door in the face of the daughter and her escort. Such humiliation will probably lead the girl to decide either not to go to dances at all, or else to go *and stay.*

Once a mother came to the office of the writer to discuss her fourteen-year-old daughter, with whom she had been having differences over a long period of time. The camel's back had been broken on the morning of the visit by some incident that had occurred at the breakfast table. The mother went on to relate that at family prayers after breakfast she had prayed for the girl. Very casually and apparently without seeing the connection, she remarked that the girl finally left the room and that later she had found the girl lying face down on her bed crying. A more surprised person could not be imagined than the mother when it was suggested to her that having one's shortcomings taken to such a tribunal *and in the presence of brothers and sisters* would *hurt!*

Teasing, throwing up past offenses, chiding for mistakes in judgment, and unfavorable comparisons with siblings cause sore spots. Trying to force a little child to speak to adults who are strangers to him or to apologize when he feels no sorrow are common examples of parental disregard for feelings. Breaking promises made to a child in what *he* considers good faith should be made punishable in some way comparable to the way used by our courts for the same offense. It is difficult not to get out of patience with parents who do not want to *make it easy for a child to do right,* who do not *respect the feelings of children.*

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[10] From Kahlil Gibran's *Sand and Foam,* by permission of, and special arrangement with, Alfred A. Knopf, Inc., authorized publishers.

Broken Homes

While we have not discussed the broken home (106) as such, we have approached the question at a number of points. Books on sociology, on crime, and on delinquency, as well as references (28), (81), and (101), may be consulted for statistics and detailed discussion. The March, 1944, Statistical Bulletin of the Metropolitan Life Insurance Company states that one child out of nine in the United States lives in a home broken by death, divorce, or separation, the homes broken by death being about 2½ times as frequent as those broken by separation or divorce. Statistics, however, cannot measure the humiliation children sometimes suffer because of the divorce of their parents. The rightness of one party and the wrongness of the other party do not determine that the child's affections are all for the parent who is "right." The child may miss the absent parent and long for him or her terribly. The difficulties may be increased by having the child spend part of his time with one parent and the rest with the other parent. Literature is full of the records of such cases, with their attempts at dual loyalty and the almost inevitable jealousies and general disintegrating influences that result. However, it must be said that individual differences operate here as elsewhere. Some children come through the divorce of their parents with little apparent trauma.

Bad as divorce of parents may be in its effects upon children, it still may be infinitely preferable to life in a *psychologically broken* but *legally intact* home. What could be more inimical to the development of self-confidence, confidence in others, and a generally positive approach to life than to live in a house, not a home, where father and mother do not speak to each other; where fights, quarrels, and bickerings are constant; or where there is dissension between parents on essential points of philosophy and of child rearing? Divorce in such cases may be much less detrimental. The writer once knew of a home where the father and mother had not spoken for years and where, when it was absolutely necessary, the children would carry legal documents, money, or other essentials from one parent to the other! Another case comes to mind where there was no divorce. The home was eventually broken, not by divorce, but by the fact that the father had to be committed to an institution. Some time afterward, the only child became delinquent and also had to be committed. One does not wonder that the girl had run away and had done almost everything else in the delinquency category when one realizes the circumstances under which she had lived after the break-up of her home. She had had to live a few months of the year with her maternal *white, Catholic* grandparents and try to conform to their manners and customs. When she appeared unable to do this satisfactorily, she would be sent to her paternal grandparents, who were *Negro* and *Protestant.* There she would be expected to do as the family did! When one realizes that the discrepancy in both color and religion had existed in her own home also, one wonders why complete insanity would not have been a merciful release for her. Perhaps we need say no more except to repeat that in many a home "the golden bowl has been broken" past any possibility of constructive influence although there may never have been a divorce.

Children Born Out of Wedlock

The question of the child born out of wedlock presents many difficulties (42, 43, 77, 103, 104, 109). Professional workers are interested in means of reducing illegitimacy (see recommendations of White House Conference (111)) and in ways of raising the standards of professional services in this field. However, one of the discouraging features of the situation is the well-known fact that altogether too few unmarried mothers avail themselves of, or at any rate are reached by, professional social service. Many "baby-farms" and unlicensed maternity homes actually dispose of illegitimate children, socially speaking, even before their birth, with no attempt to establish the mother and baby together. In this field, as well as in the field of adoption, many child-care agencies seriously ask themselves whether the detailed investigation which they consider essential to good case work may not actually drive unmarried mothers to adopt "bootleg" methods in preference to professional social service.

When one considers that in the year 1940, there were 77,558 illegitimate live births in this country; in 1941, 83,067; and in 1942, 83,459; and that the death rate among illegitimate children is much higher than among other children, the seriousness of the matter seems almost overwhelming. Many illegitimate children are born to mothers who are too young to be entrusted with the upbringing of a child, and many are born to defective mothers. Newspapers have recently carried many accounts of marriages of 12- and 14-year-old girls. Just what social help communities permitting such marriages plan to give these child brides when they become child mothers is hard to imagine. It is impossible to see that a 12- or 14-year-old girl can have the maturity to direct the rearing of another human being.

It is very hard, in most communities, for the unmarried mother to provide conditions that are desirable for the rearing of a child. In most American groups, at least, society is not ready to receive such a child and such a mother on terms equal to those accorded to the child born to married parents, regardless of the worth or fitness of the unmarried parents to rear children. The social problem of the unmarried mother and of the illegitimate child is infinitely more acute in some social groups than in others. Illegitimacy is so common among certain classes that little is thought of it. Within these classes, the child born out of wedlock may be accepted and may suffer little emotionally because of his birth. As soon, however, as he mingles with children from other groups, he is likely to be seriously traumatized.

In addition to the opprobrium which society casts upon the illegitimate child, there are other factors that tend to lessen his chances for normal emotional growth (55). In many but not all cases, the unmarried mother does not welcome the thought of giving birth to a child under such circumstances. The writer once worked with a delinquent girl who had been born out of wedlock. In fits of anger, the child's mother would snarl "bastard" as if the child were in some way to blame for the whole unfortunate affair of her birth. It might be well for us to question whether *we* would have escaped delinquency if we had been reared under such circumstances. The unmarried mother may be quite hostile to the father of the child. She may dread the approach to her own family. Her family may and often do reject her. With such hostilities in her mind, it is difficult for her to develop the emotional poise and the affection that are essential if her child is to develop good mental hygiene.

The day of "shotgun marriages" is past. The White House Conference Report (111) says,

> Marriage for the purpose of giving the child a name, when not based on mutual respect and affection and when there is no desire or intent on the part of the parents to live together as married people, tends to complicate rather than simplify the situation, and therefore rarely offers a solution.

One is tempted to wonder, however, whether something may be lost by our not insisting upon the marriage of the parents of a child born out of wedlock. Of course, from the standpoint of the child, no one would recommend *the establishment of a home* by parents who do not want to marry each other, or who do not want to accept the child or make a home for it. One also realizes that divorce is expensive and not easy to obtain. The question remains, however, as to the extent to which a child will be emotionally handicapped and socially embarrassed all the days of his life if he is not able to say: "Of course my father and mother were married. They just don't live together now." One might say to oneself: "What would be the best thing if this were *my* daughter or *my* sister? Would I want her to be married and give her child a name even though she is not going to live with the child's father afterward?" However this may be, social-work practice today does not try to force marriages.

In order to prevent hasty giving away of babies and in order to insure that mothers nurse their own babies, some states have passed laws requiring that a mother and her baby must not be separated for three months. In some states, the period is six months. The question is being seriously debated in some quarters now as to whether such a legal provision does not interfere with the individual case work we like to think each separate case deserves. In cases where we know that the mother will not be able to rear her own baby, some feel that it is better to take the baby away early. Improved artificial feeding techniques make this relatively safe. However, some hospitals seriously disapprove of any plans by physicians on their staff to place an illegitimate child before its birth or to deny it breast feeding. It would appear that, in any case, plans for giving away the baby or for its adoption should not be made before the child is born and the mother has had time to recover her health and to think matters over with the help that a skillful case worker can give her.

Sometimes professional skill is of great help to the unmarried mother regarding her relationship with her own family. In many cases, to the utter surprise of the unmarried mother herself, a reconciliation with her family and an acceptance of her and her baby are happily brought about. In other cases, where the family defiantly refuse to accept the girl *or* her child or the girl *with* her child, great skill is required to make plans which will be for the good of the baby and will, at the same time, make it as easy as possible for the girl to reconstruct her own life along positive lines.

The problems of vocational rehabilitation, the specific skills required for bringing about emotional readjustment in the unmarried mother and long-time planning for the baby, cannot be considered in detail here. The child psychologist, however, is interested in all educational and social programs that will prevent such human tragedies, and will make for the most normal and happy life for the child born out of wedlock and for his mother.

Some states requiring the fact of illegitimacy to be recorded on birth certificates now grant a short form of certificate that can be used for most school and employment purposes which records date and place of birth but does not report names of parents.

Sibling Relationships

Obviously, home influences include sibling relationships as well as parent-child relationships. However, as has often been pointed out, even sibling relationships are likely to be important largely to the degree that they involve also parent-child relationships. The jealousy of an older child toward one born later is an example in point. Other aspects of sibling relationships may be studied in several Smith College studies of 1930 and 1931 as well as in references (5, 39, 59, 66, 95). No doubt many adult personality aspects such as *ascendency* and *submission* have their roots in sibling relationships in the home. Unfortunately, the cases of beneficial sibling relationships do not as a rule concern the professional worker in his or her professional work. As a matter of life interest, however, they must not be overlooked. Bradbury and Amidon have written a book (14) on training for high-school youth who take care of their small siblings.

Sometimes the *obvious* relationships between members of the family are not the *actual psychological* relationships at all, as witness the answers given by two children evacuated from bombed areas in the cities to evacuation camps in rural England. To the question, "What do you miss most in your new home?" one homesick girl replied, "I think the thing I miss most is not having my brother tease me," and another child said, "The thing I miss most is not hearing my father complain about who took his evening newspaper." Even such family situations can really have positive attachment values for children.

As regards sibling relationships, two other matters are of almost everyday concern to the worker with children. One point has to do with the wisdom of making a child "my brother's keeper." This device seems to be frequently used. It would be interesting if someone were to make a study of the cases where it is used successfully and of the ones where it does not work at all. An *a priori* judgment would be that, more often than not, where a child is in sufficient emotional or behavior difficulty to need help, matters will only be made worse if a well-adjusted child in the family is made responsible for him. That is injecting more of the toxin that may have caused the difficulty in the first place.

Another matter of concern to the professional worker is found in those families where normal children are being hindered by the presence in the home of abnormal children. Sometimes defective children require, or at any rate receive, such an undue proportion of the time and interest of the parents that the other children in the family are actually neglected. In other cases, the presence of a markedly deviating child in the home may adversely influence the behavior and emotional stability of an otherwise normal child. In still other cases, the deviating child is so markedly defective or peculiar that his presence is the cause of constant embarrassment or worry to other children in the family. The writer recently examined two siblings in a home in which the parents and all near collateral relatives have very superior intelligence. The oldest child in this family, apparently as the result of an injury in early infancy, has an intelligence quotient of 61, whereas a younger brother has an intelligence quotient of 151. It will require intelligence on the part of these parents to handle that situation wisely. In deciding upon plans for deviating children, whether it be hospitalization, special school, or what-not, the interests of *all* the children in the family must be taken into account. A violation of this principle is often seen when parents spend so much money for the attempted education of a feeble-minded child that the education of the normal children in the family is actually curtailed.

The Only Child

The only child in the family has come in for a large amount of investigation and research. He has even been referred to as a "disease" in himself. References (18, 51, 107) may be consulted as typical of the studies on this matter. The question is confusing and involved in the extreme. The only child may or may not be born to parents who regulate the size of their families in proportion to their ability to provide. The only child may or may not be born to couples relatively advanced in years. Similarly, he may or may not be born where he is extremely welcome. He may or he may not be spoiled. The burden of evidence seems to indicate that onliness *per se* does not constitute a developmental hazard. In fact, there is no one position in the family constellation to which such difficulties can be reserved. The youngest child, the first boy, the first girl, the child born when the parents are relatively older—any one of these may be the "spoiled" child. Further discussion of these points may be found in (38) and (60). Social workers could add materially to the literature of family relationships if they were to record all their experiences in homes where there were involvements due to the presence of boarders, roomers, and grandparents. The presence of anyone not in the immediate family may throw home life out of focus.

Imaginary Playmates

Two bits of imaginative ideation of children relative to home relationships are pertinent at this point. One is the "imaginary playmate." Frequently children, perhaps more often only children, phantasy the existence of one or more children of about their own age. These imaginary children may be named and all their attributes clearly envisioned. They may seem so real as to take up space on chairs or at the table. Occasionally, a child will commit a deed which he ascribes to the imaginary child. Great care must be exercised in handling such episodes. If the child clearly is not distinguishing between the real and the fancied, he does not need punishment. Instead, he needs more experience with reality and with other children. He also needs sympathetic help in distinguishing between the fancied (which may be quite beautiful and constructive) and the actual. Highly imaginative and lonely children sometimes have whole families and even towns of imaginary people. Preschool children often seriously announce to the nursery school teacher or to strangers that "we have a new baby at our house" when such is not the case at all. A normal child usually willingly abandons an imaginary playmate or sibling in the presence of a real child with whom he can play. As a rule, the fancy is outgrown in time with no bad consequences.

Foster Child Phantasy

The other imaginative behavior relating to home life is the so-called *foster child phantasy.* It is not an uncommon thing for a child to hug a sorrow to his breast for a considerable time, making himself miserable with the thought that he is "only adopted." Stories of cruel stepmothers may seem very real if he is punished or denied a pleasure. (Would that someone would write about the many excellent and adored stepmothers that some children have been fortunate enough to have had!) Thoughtless remarks about differences in appearance among members of the family may add fuel to the fire. The tragedy of the situation is that the fear that one is adopted is usually a *hidden* fear and the parents know nothing about it. In order to prevent such fears, many parents deliberately make a point of showing children their birth certificates or baby books. An occasional remark about "when you were born," or "how much you look like your father and your mother," or "you are so much like your grandmother," may go far toward preventing the foster child phantasy.

Effects of Mental Illness of Parents

Interesting as the study is, particularly to psychiatric social workers, we can at this point merely touch upon the effects of mental disease of parents upon children in the home. For those desiring to pursue the matter further, reference should be made to (2, 11, 19, 20, 76, 115), as well as to numerous Smith College Studies. Obviously, we are not interested at this point in the question of the germinal transmission of mental disease. What concerns us now is the type of home provided for children by psychotic or criminal parents. Bender (11) had an unusual opportunity in Bellevue Hospital in New York City to study such children, who were referred because of behavior difficulties. Children were selected for study "upon the conclusive evidence of the psychosis or criminal record of the parent." Sixty problem children, whose parents were schizophrenic, had affective psychoses, were defective, epileptic, syphilitic, alcoholic, criminal, or had met violent deaths, were studied. In the case of children of *schizophrenic* parents, "the evidence for constitutional defects is not entirely lacking. It seems to play a part in about one-third of the cases." In the other two-thirds of the cases, the child's disturbance seems, rather, to be due to the "abnormal parent-child relationships and identification process, the broken homes, and the resulting deprivation of normal parent-child relationship and identifications." Interestingly enough, Bender finds that the effects upon the child do not manifest themselves, as a rule, until early puberty, regardless of the age of the child when the parent developed mental symptoms. Bender likens this to the fact that children who show personality change after skull fractures do not ordinarily appear for observation until early puberty, although the skull fractures may have occurred several years earlier. The children of *schizophrenic parents* show the "greatest variety of behavior difficulties." In regard to the children of parents with *affective psychoses,* Bender says there is no evidence for any hereditary factors. "The personality difficulties of the child appear to be the result of the turmoil in the family life." [11]

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[11] From Lauretta Bender, *Behavior Problems in the Children of Psychotic and Criminal Parents,* by permission of *Genet. Psychol. Monog.*

Adamson (2) approached the question from the other end by studying the early life of adults who had become psychotic. He reviewed 500 psychiatric patients' records, together with the comments and digests given by the examining psychiatrists. The determiner of the maladjustment seemed to have been *abnormal parental attitudes.*

Witmer and her students made a study (115) of the childhood personality and parent-child relationships of dementia praecox and manic-depressive patients in five state hospitals. Handicapping emotional conditions were found to have been present in a large proportion of the homes, particularly in the homes of those who were diagnosed as manic-depressive. "Overprotection, often of an extreme form, was fairly common, especially in the manic-depressive group, and in a third of the cases the mother was unusually dominant and the father played a very weak role."

Rating Scales for Homes

Students of sociology have long been interested in scales by which to evaluate the more material aspects of the home. Various of these devices are listed in (15, 22, 56, 101, and 113). The *more subtle* question is that of an evaluation of the *psychological* factors in the home. The complexity of these factors baffles even the most expert professional worker when decision has to be made as to whether or not to break up a home for the good of children, or whether or not to remove a child from his parents. Ordinarily, one of the first principles to be observed is that one should find out whether the child is receiving emotional security and affection in his home. If he is not, then the question of removal is relatively easy. The difficulty comes in those cases where devotion seems to exist. Suppose, for example, we have this combination: love, fair degree of emotional stability, intelligent interest in child's welfare, and poverty. No professional worker in the country would recommend breaking up such a home as that. Suppose, on the other hand, the combination is love, paradoxical neglect, emotional instability, poverty, and ignorance. Then the question becomes much more debatable. Take the home where there is love, immorality, dishonesty, quarrelsomeness, ignorance, emotional instability, and poverty. To what extent should love be allowed to balance the negative factors? Research on outcomes and ultimate effects upon children, carried on through comparative follow-up studies of children removed from undesirable homes and children allowed to remain in such homes, offers a wide scope to aspiring students in social case work (84).

Philosophy of Child Rearing

Perhaps one of the most serious considerations in regard to the effect of home life upon the child is the fact that the relationships there established start an unending chain. The kind of parent that the child himself will later become is determined by the effect that his own parents have on him. In some cases, the child may deliberately make up his mind that there were so many mistakes in his own upbringing that he will avoid them with his child if possible. More often, perhaps without realizing it, an adult simply adopts with his children much the same methods that were used with him, and so history continues to repeat itself. Most parents probably do not know where or how they got their ideas and philosophies on child rearing. It is safe to say that they got them either exactly, or contrariwise, or slightly modified, from the ideas and philosophies of *their* parents.

It may seem that the present chapter has presented a rather sorry picture of home life and family relationships. It must be kept in mind that our discussion has had as its point of reference maladjusted families and children, as the case worker, the visiting teacher, the public health nurse, and other professional workers find them. Who can say but that the other side of the picture—the fine attitudes that come from beautiful family life—may not be represented by the very readers of this book who are interested in making home life as fine as possible for children?

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Chapter VIII

THE CHILD AWAY FROM HIS OWN HOME

Introduction

By coincidence, while working on the present chapter, the author was reading Byrd's *Alone* (11). Byrd describes his stay of more than three months at Advance Base—absolutely alone in the antarctic winter night. Certainly no more dramatic story of man's coming to grips with his own mind and his own psychology has ever been written. However, it must be borne in mind that Rear Admiral Byrd, an adult with vast experience, was able even in his suffering and his solitude to detach his mind from his body, so to speak, and to take an intellectual interest in his own thought processes. Out of it all, he was able to evolve a philosophy that undoubtedly saved his life and his reason. It has occurred to the writer again and again while reading *Alone* that perhaps the experience of little children who find themselves without a home, who are removed from their parents and are put into foster homes or institutions, may be as devastating to them as being alone in the dark of ice-bound Antarctica was to Byrd. The child, however, cannot detach himself from his suffering and cannot enjoy watching his mind think or feel. And certainly he has no philosophy—or does he develop one? If he does, his philosophy is probably not one of "harmony" with the universe as was Byrd's, but may be one of conflict against cruel, crushing outside forces.

Deprivations

If the previous chapter has succeeded in its attempt to develop a concept of the influence of the home upon the child, the present chapter can begin at that point. All the favorable subtleties of "belonging" to a family group are endangered for the child who has no home of his own or has had to be removed from his home. As Jessie Taft (80) says, "Any dependent child who has not been in one home from birth has suffered a shock to his confidence in life; he has a basis for fear and for compensatory striving, to bolster up his security and make himself feel as safe as possible, which the own child hopefully escapes." Serious as the condition is for one child, the enormity of the problem is overwhelming when we realize the large number of children to whom it applies. The White House Conference (92) reports that for 1930 there were in this country 1,600 institutions and 400 child-placing agencies caring for about 287,000 different children. About two-fifths of this number were in foster homes. Some 253,000 needy children were reported as living at *home.* At least we no longer remove children from their homes because of poverty, thanks to the economic provisions of modern legislation (8, 12, 49, 56, 71).

Four of the 19 points of the Children's Charter adopted by the White House Conference stress topics which we shall have in mind in discussing care for dependent, neglected, and delinquent children. The points which apply particularly to these necessities are[1]:

III. For every child a home and that love and security which a home provides; and for that child who must receive foster care, the nearest substitute for his own home.

VII. For every child a dwelling-place safe, sanitary, and wholesome, with reasonable provisions for privacy; free from conditions which tend to thwart his development; and a home environment harmonious and enriching.

XIV. For every child who is in conflict with society the right to be dealt with intelligently as society's charge, not society's outcast; with the home, the school, the church, the court and the institution when needed, shaped to return him whenever possible to the normal stream of life.

XV. For every child the right to grow up in a family with an adequate standard of living and the security of a stable income as the surest safeguard against social handicaps.

We like to think that foster and adopting parents should have the qualifications of the very best of *own* parents; that institutions should be conducted so as to lose as few of the benefits of home life as possible; and that house-mothers and house-fathers in institutions should be chosen with the same care and discrimination as is used by good child-placing agencies in the choice of foster or adopting parents. For these reasons there is much overlapping in the discussion of these services. The suggested readings for the previous and the following chapter, therefore, furnish material from the same point of view, and should be considered in connection with the bibliography for this chapter (13, 14, 15, 50, 56, 82, 83, 91, 92, 94).

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[1] From White House Conference on Child Health and Protection, *White House Conference 1930. Addresses and Abstracts of Committee Reports,* by permission of D. Appleton-Century Co., publishers.

We are seeing an increasing number of private residential schools for problem children. Well-trained psychiatric, psychological, educational, case work, and group work staffs study the child with the purpose of re-education. Obviously, such technical service is highly expensive as measured in dollars and very inexpensive as measured in human welfare. Society may be expected to decide in the not too distant future that it may better spend more money in this way earlier and less money in penal institutions or mental hospitals later (48). (See refs. for Chap. 10 also.)

Who Are the Children Who Are Away from Their Own Homes?

Ordinarily we speak of these children as being dependent, neglected, or delinquent (1, 50, 82, 83, 92). *Dependent* children are those who, because of the death of their parents or for other reasons, are dependent upon the public for their support and maintenance (15, 18, 45, 49, 57, 58, 83, 86, 87, 92). *Neglected* children may have homes of their own, but may nevertheless be abused or neglected. They may even be abandoned. The distinction between these two classes is tenuous, since a child may be dependent *and* neglected. *Delinquent* children are those whose adjustment to the demands of society is not acceptable to society. Such children are sometimes cared for, with the idea of readjustment, in their own homes; sometimes in foster homes; and sometimes in institutions (6, 7, 18, 21, 27, 28, 37, 40, 67, 71, 82). Children with serious mental or physical handicaps also may require placement away from their own homes.

Evaluation of Placement

This is not an appropriate place for a critical evaluation of various child-placing devices (4, 61, 71, 81). Somewhat more detail will be given in Chapter XIV. However, any time or place is appropriate for a serious student of child-welfare problems to ask himself some questions. What is wrong with our preliminary investigations, for example, when it is later found that a particular child does not "click" with particular foster parents? How much harm comes to a child who is moved from one foster home to another and may even change his name to that of every foster home into which he moves (17)? How can we improve our investigating techniques so that we can be sure we have caught more of the intangibles that make a good or a poor foster home? How can we be sure whether desirable changes which we see in children whom we have moved are the result of what we have done or whether they would have come about anyway through growth? How can we discover whether the improvements in a child who has been placed result from his new human relationships or whether, as Dr. Plant says (66), they may be the result of the "shock of change" or "geography of habits"?

How long must we follow through in the life of a child to know whether improvement lasts after he leaves the foster home or the institution? This question will be discussed in more detail in Chapter XIV. It is pertinent at this point, however, to notice the impetus which the problem received by the publication of Healy and Bronner's *New Light on Delinquency and Its Treatment* (40). In their previous *Reconstructing Behavior in Youth* (41), Healy and his collaborators had given statistical data on treatment and its effects on 501 boys and girls, aged 5 through 20, placed in foster homes upon recommendation of the Judge Baker Foundation. It is impossible to give even a summary of the elaborate statistical results to be found in this volume. One or two quotations, however, are particularly significant[2]:

> Almost 90 per cent of those who did well in placing did well later on, as did 86 per cent of the delinquents; many accomplished this in spite of having returned to bad conditions. . . . It appears that 85 per cent of our delinquents showing normal mentality and personality, including severe and repeated offenders, ceased to be delinquents under the conditions of foster home care. . . . For normal personalities the chance of success is over five to one.

This volume was published in 1929. In *New Light on Delinquency and Its Treatment,* published in 1936, Healy and Bronner say[3]:

> Some years ago we made a special study, *Reconstructing Behavior in Youth,* 1929, of the immediate results of selective foster-home placing and found them remarkably good, proving that in the vast majority of cases where the delinquent did not show personality deviations it was very possible to check delinquent tendencies. But we have followed the cases then studied after an interval of years and discover that upon return to inimical conditions a majority sooner or later reverted to delinquency.

In justice to Drs. Healy and Bronner, one should read the whole of the later book (40), as well as Glueck and Glueck (32), to discover some of the mitigating factors, such as delay in foster home placement after recommendation for such had been made, short stay in foster home, amount of delinquency before opportunity for study or placement, and other factors. (See Chapter XIV.)

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[2] From *Reconstructing Behavior in Youth,* by Healy, Bronner, Baylor, and Murphy, by permission of, and special arrangement with, Alfred A. Knopf, Inc., authorized publishers.

[3] From *New Light on Delinquency and Its Treatment,* by Healy and Bronner, by permission of the publishers, Yale University Press.

Decision as to Proper Placement for the Child Removed from His Own Home

In the last chapter we raised the question as to criteria by which to decide when a child should be removed from his own home, and when the home should be broken up (4, 71). Even when the answer to such questions is clearly in the affirmative, the decision as to *where* the child shall be placed is one requiring the greatest wisdom, as every professional case worker knows. Sometimes agencies take periodic inventories to see what their own practice actually is in this respect. Carl Rogers, formerly of Child Study Department, Rochester Society for Prevention of Cruelty to Children, has reported such a study (72). Dr. Rogers says that, in the treatment of the child, "removing him from one situation, presumably unhealthy, to another which is carefully chosen to meet his physical, mental, and emotional needs" is "probably a therapeutic measure which we use much more frequently than we realize." This was found to be true in Dr. Rogers' own data, not only for children who when first seen were in their own homes, but also for children who were already in foster homes and were recommended for still more moving around.

Choice between foster-home and institutional placement must be on an individual basis (29, 42, 71). No rules can be laid down that will automatically give the answer. However, it is well to consider some of the factors that normally have to be taken into account in making such important decisions about the children for whom we are responsible. Age, intelligence, physical condition, emotional make-up, behavior record, and nature of the present problem are some of the most important factors for consideration.

Psychology is stressing more and more the necessity of placing babies and very young children in private homes. During these early years when a child is trying to sink his roots down into this strange world, he seems to need the security that individualized treatment and handling in a family can give. Both physical-health records and studies on emotional health point in the direction of family care for young children. Some older children cannot accept foster homes because they have been so long in their own homes that they are unwilling to adopt substitute parental relationships. Whether or not this is true, of course, depends upon many factors in the life of the child and should not be interpreted to mean that older children can never be put into foster homes.

Health has to be considered in deciding placement. It is probably the rare case, for example, where foster-home placement should be recommended for children with venereal infection. Good institutions are, as a rule, equipped with staff and physical facilities to provide isolation and medical care in such cases in a more effective and less highly emotionalized way than foster homes. On the other hand, children with severe heart involvements, who require quiet and very simple living, are often best taken care of in foster homes, particularly when the home is chosen with this idea in mind. Acute or infectious diseases require the services of a good institution, even though it may be wise to remove the child to a foster home when his health improves. Children with sensory deprivations, such as blindness or deafness, may be better understood and more adequately educated in the schools or institutions provided for such children. Such decisions often need the combined judgment of experts in several fields: the doctor, the case worker, the teacher, and the psychologist.

The intelligence of the child is always a factor in placement. Until good foster homes are much more numerous than they are today, we shall probably continue to place our feeble-minded children in institutions, thus saving our foster homes for those children from whom society has a right to expect social contribution and participation. It should be noted, however, that some institutions for defectives have their own foster home department to which they transfer some of their institutional population.

It is necessary to distinguish between the mentally defective child who can be made happy through a suitable educational program and a child so defective that custodial care is the factor of prime importance. Children of the latter type are often left in their own homes when, for the welfare of *all* concerned, they might better be institutionalized. If a child is to be put into a foster home, there must be, as regards intelligence, such parity between him and the foster family as to insure his being understood. Children of superior intelligence should be so placed that they will be given ample stimulus and appropriate educational opportunities.

One of the hardest problems as to proper placement arises in the case of children with serious emotional involvements. This is particularly true of many of the behavior problem children of whom we shall speak in a later chapter. For such children most communities have neither institutional nor foster home services that are appropriate or adequate. Where behavior disorders are due to brain injuries or infectious diseases such as encephalitis, highly specialized institutional care and training are indicated, but are very difficult to find in most parts of the country. Some disturbed children profit by simple routine, with a certain amount of firm authority which can often best be provided in an institution. Some children who are upset because of unsatisfying human relationships may have their needs met best in a foster home. Other children suffering for the same reason may not be able to accept foster home relationships. For them, for a time at any rate, institutional placement may be necessary. This distinction requires that we have an intimate understanding of the child and his reaction patterns before we decide which type of placement is more therapeutic.

The nature of a child's disturbing behavior is an important factor in choosing placement treatment. Often children with a relatively short history of problem behavior may be tried out in foster homes before the more severe institutional treatment is resorted to (42). Serious behavior disorders menacing the safety and welfare of others may require institutional placement for custodial care. We hope that the time may come when institutional placement for these children will be for purposes of treatment as well as for custodial care.

Present policy in handling behavior problems indicates certain sex differences. As will be noted in a later chapter, girls are not likely to be referred to a children's agency or children's court so soon or so early as boys. The girl is more likely to be sheltered by the home. By the time the home cannot, and society will not, tolerate a girl's misdemeanors longer, she is likely to be quite habituated to her unsocial behavior. She is thus in a serious condition of maladjustment. Furthermore, her offenses are likely to revolve around sex. For these reasons, a girl who is referred to a protective agency because of behavior disorders is more likely to be recommended for institutional placement than a boy.

Foster Homes

Home finding. Finding suitable foster homes has always been a somewhat difficult problem—more so in some communities than in others. Since the beginning of World War II, many cities have had more difficulty than ever before and have been unable to place many children who acutely needed foster home care.

Because it is realized that such a large measure of the success of foster home placement depends upon the homes chosen for this service, most child-caring agencies assign the duty of home-finding to special investigators or to a special department (9, 14, 23, 55, 65, 71, 84, 85, 86, 87, 88, 89). Communities vary greatly in the number of acceptable homes available. Some communities have to resort to devices such as newspaper articles, radio talks, publicity campaigns, speeches to clubs, conferences with foster parents whose homes are already in use, and visits to ministers, doctors, and other professional people to find foster homes. Interested persons are asked to apply and are given to understand that application to take a child for home care necessarily implies a thorough investigation. The investigation, in most agencies, includes evidence presented by the prospective parents themselves; evidence from references whose names have been given by the applicants; and interviews with other reliable people in the neighborhood who know the applicants well. Several visits are made to the home to see the surroundings, the house itself, and as much of the atmosphere and the relationships within the home as can be ascertained. Visits to the school are usually made, since it is important to know something of the opportunities for general and specific educational training which the neighborhood provides. It is of extreme importance also to know how the school and the community will react to a foster child in their midst. It might be said, then, that an adequate foster home investigation includes an investigation of the foster parents themselves and of all members of their household and, for that matter, of their immediate relatives who are to form a part of the family life for the foster child. Second, the investigation must scrutinize the physical and social environment of the home. Third, the investigation must reveal a great deal about the child himself before we know whether he will be able to profit by foster home placement and, if so, which is the home for him. An otherwise fine placement will fail if the home chosen does not give to a child what that particular child needs.

Foster parents. An evaluation of the suitability of prospective foster parents may well begin with an inquiry into their reasons for wanting to take a child into their home (9, 24, 41, 69, 70, 71, 73, 80). Sometimes, the expressed motive is that a childless couple feel their home life would be more complete if there were a child in the home. Such a statement is not so simple as might appear on the surface. If possible, we should find out why, if the couple really want children, they do not have any of their own. A case comes to mind of a prospective adopting mother who said to the writer recently: "The doctor says my husband and I will never have any children. I guess it is because of some disease my husband had before we were married." Such childlessness obviously needs further inquiry before we can decide that the physical and social factors in that home at the present time are such as to warrant placing a child there.

Again, if childlessness is caused by the fact that one spouse wants children and the other one does not, we should have good reason to question whether the same condition might not be true as regards a foster child. Certainly a child should not be placed in a family unless he is wanted by all members of that household. This is particularly true since the reason for his needing foster home placement may be that he has always heretofore been an *unwanted child*. If, on the other hand, a couple are childless but for no sinister physical reasons and enjoy children so much that they frequently "borrow" the children of their friends and neighbors, one might go on to investigate other items of suitability.

If a child of their own has died and the family desire another child as a substitute, we like to be very sure how, and to what extent, a foster child would be used as an emotional stopgap for the parents' grief. In such a case, a foster child might be given too much care and overprotection. On the other hand, the foster child might constantly be made the subject of unfavorable comparison with the deceased child. In some instances it has been found that parents who have lost a child by death actually cannot accept another child, even though they think they want one. The grief of seeing another child in the high chair formerly used by their baby may be more than they can stand. One cannot generalize on such matters, however, because some parents who have lost a child still have perspective and may be quite able to accept another child and give him balanced love in a very wholesome and constructive way.

The writer has recently been professionally interested in two families that would appear to have all the qualities of fine prospective foster homes. In the first home, two highly intelligent parents have been devoting themselves to the care of their two spastic children. After trying all possible professional help they have convinced themselves that the children must be institutionalized inasmuch as their intelligence is low and their care at home has become impossible. The suggestion has been made to them that, having shown such skill and patience with these children, it would be a fine thing if they were to take normal children into their home and allow them an opportunity of fine rearing. This idea naturally will be accepted, if at all, somewhat slowly, but in the end they may wish to take children into their homes and their lives. The other home likewise has highly intelligent parents. They have devoted themselves to an attempt to teach a mentally defective son. The writer felt very humble indeed when the mother asked for suggestions as to how she might better care for and train her son. Probably no professionally trained person has ever done a finer job than this mother. The child is now of such age and size that his care at home is no longer possible. When the parents finally decided that for the sake of the mother's health and the well-being of the neighborhood children they must institutionalize their child, they seriously began considering opening their home to a foster child.

In some cases, one suspects that a foster mother wants a baby for a plaything. A case comes to mind of an 11-months-old baby seen by the writer. The child had been in the foster home for about a month. She was beautifully and indeed rather expensively dressed. The last touch was an obvious "wave" in the short thin hair at the baby's neck. How such a feat had ever been accomplished with an active child of this age one cannot imagine. One could but wonder, however, whether that foster mother was using the child as a doll.

Occasionally, applicants say that they wish a foster child as a companion for an only child in their home. This matter needs careful scrutiny before we shall know whether the foster child would be welcomed by the own child; whether the own child is spoiled or maladjusted and needs another child for "treatment" purposes; whether the two children would complement each other in a wholesome and educative way.

We sometimes suspect that one spouse may be desiring a foster child to play off against the other spouse because of marital disharmony between them. We do not want our foster child used for any such purpose. Furthermore, we need to be as sure as possible that the presence of a foster child in the family will not make for jealousy between the foster parents or, for that matter, between any members of the family.

Such a case in which there is grave question of the suitability of the prospective foster parents comes to mind. The man and his wife have no children and live with the wife's parents. The wife's mother apparently is a kind of "apron-string" mother whose children, even though adult, have never outgrown her domination. She has managed to keep both her son and her daughter at home with her and gives "free rent" to the married daughter and her husband. The household seems to revolve around this seventy-year-old woman.

Within recent months, the son-in-law has been actively contacting social agencies, psychologists, and even politicians in an endeavor to get a child to adopt. Recently he and his wife and some friends took an orphan child in whom they were interested out for an automobile drive. As they passed a candy store the man said to his wife, "Let us stop and buy this little boy some candy." Without hesitation the wife replied: "You go in and get it if you want to. *You* are the one who is getting the thrill out of this." There would seem to be small question as to the respective attitudes of this man and his wife toward the adoption of a child. One cannot but wonder whether the man may be tired of seeing everyone in the household dominated by his mother-in-law and whether one of his reasons for wanting to adopt a child may be to get someone whom *he* can dominate. In any case, it would seem unfair to place a child for adoption, or even for foster home care, in this household of five adults—with as little chance to lead a life of his own as he would have in the institution.

The question of remuneration for foster home service is, of course, another matter that requires careful consideration. If there is any evidence that the primary motive in applying for foster children is a mercenary one, it is usually easy enough to show foster parents that actually foster home care is, in most communities at least, far from a money-making proposition. It is a kind of semi-professional service for which, of course, we expect to pay and should like to pay more. As a matter of fact, where the motive is genuine interest in children, foster parents do not hesitate to use their own money to provide some items that cannot be covered by the fee they receive for their services. Many foster parents furnish extra allowances, music lessons, trips, and other recreation because they want the children in their home to have the best they are able to provide.

The whole question of remuneration and economic status has been of grave concern to child-placing agencies during the recent years of financial stringency. During the depression in the thirties, the question was often asked as to whether children should be placed in foster homes that were already on relief. Probably no one would question that a policy of doing so would be bad. There is too much danger that the child would not receive adequate physical care; that there might be such anxiety over money matters in the family as to interfere with emotional security; or that the child would be accepted because he was adding to the family income. On the other hand, suppose a child is *already* in a good foster home, perhaps even the home of a relative. Suppose the home is furnishing the child a wholesome security. If reverses should come upon that family to the point that they need relief, shall we then uproot the child and remove him from the home? There has been difference in practice from one child-caring agency to another on this matter. On the face of things, one might say that if the foster home was good for the child in every way before poverty struck, then he should not be removed from it because of poverty any more than we remove children from their own homes because of poverty. Perhaps there are not many foster homes where low income or no income is the only negative factor. If not, then of course all factors must be weighed. If, and when, everything else in the foster home relationship is desirable for the child, perhaps the family's going on relief, with even a possible curtailment in the food budget, may be less devastating to a foster child than being uprooted and put into a new foster home with a higher income.

We have spoken at some length about inquiry into the motives which prompt people to apply for foster children. In addition, what do we need to know about the foster parents themselves as persons? While we do not wish foster parents to "pity" their charges, yet it is hard to imagine that anyone would be a good foster parent who was not essentially a warmhearted, outgoing kind of individual (5, 20, 24, 29, 69). The writer recalls one foster home used by an agency over a period of years. Many babies were placed there. Sometimes, indeed, there would be four or five children under two years of age in the home at the same time. One questions whether, under such circumstances, a foster home has not turned itself into an institution. A record on these babies showed that they were always kept spotlessly clean. They were always given the diet recommended by the agency's physician. They were always kept on an excellent sleeping schedule. Their toilet habits, or perhaps one should say their toilet processes, were well regulated, even though it was supervision by attendants rather than self-control which was stressed. In spite of all these desirable features, the babies in this home did *not* respond in weight, in emotional control, or in intellectual development as they should. The foster mother frankly admitted that it was *physical care* as such that intrigued her. She bathed the babies, or had them bathed, but it was a clean-looking baby in which she was interested rather than the actual handling of the baby or the relationship between herself and the baby. She also admitted that as soon as babies "got on their own" to some extent she was no longer interested in them. All in all, one got the impression that perhaps this woman would have been just as concerned about, and might have done a better job in raising, thoroughbred dogs or cats. She gave care, but she never gave of herself. The effect upon the children was pathetic to see. Some of the children when taken to a psychological clinic, for example, were like frightened little rabbits that jumped when they heard a strange voice. The writer recalls one of these children whom she tried to test at something less than two years of age. The child was negativistic in the extreme. She refused to sit down at the small table where the test materials were placed. Instead, she walked around the room with her head down and with one finger in her mouth. When pictures or toys were proffered her, she would sullenly refuse them. Getting nowhere, the examiner finally arose from her place at the little table, picked the child up, and placed her on her lap. No sooner had she done so than she wondered at her own rashness, for surely this shy and negativistic child would respond negatively to such intimate physical contact with a stranger. Interestingly enough, the spontaneous action on a "hunch" turned out to be more sound than deliberate action on theory would have been. The child snuggled up against the examiner and began responding to all the tests to the best of her ability. From that time on, there was no question of securing her coöperation. Her behavior was more like that of a two- or three-months-old baby that reacts to physical contact with another human body than like that of a two-year-old who responds to *social* contacts with another human being.

In the foster home program, the speed and degree of identification between children and their foster parents is perhaps the point where the subtleties are most significant. This can be noted in such practical matters, for example, as what the child is to call his foster parents. Certainly the cue here, with children old enough to talk, is to allow the choice to come from the child. If the child *chooses* to say *mother* or *father,* well and good. If that is not the way he *feels,* at least for the present, nothing but harm can come from trying to force him to use these names. The child may need help in choosing a name to use because he may not know how to take the initiative. The foster mother, for example, may say to the new child in her home: "What do you think you would like to call me? Do you want to say *Aunt Mary,* or *Mrs. White,* or *mother,* or what do you think? You think it over and decide what you want to call me."

Another example of the identification process involves caressing and fondling. If a child is resentful of having been taken away from his own home, caresses from members of the foster family may greatly increase his antagonism. His hostility may need to be broken down first by a kind of impersonal fairness and squareness before he is ready to accept affection, which in reality he may be craving. Other children who have been emotionally starved before placement may respond to judiciously administered affection to the extent that they go to sleep at night sighing, "Well, everything's all right now."

The identification process requires skill in handling the child's feelings about his life prior to placement. A good foster parent does not ask the child questions about his life's tragedy or probe into his sore spots. A good foster parent, however, must know how to meet confidences when the child *wants* to talk about himself. For this reason, it seems only fair to entrust a competent foster parent with enough information about the child that he or she may be able to answer the child's questions in such a way as to build up his confidence in himself and in other human beings.

Foster parents may legitimately express a preference for certain ages or types of children. Some adults seem to understand babies or little children better and respond to them more freely than to older children. Such foster parents may be acceptable if we can assure ourselves that they will allow children to grow up and will not try to keep them dependent. If foster parents express preference for active, rowdy boys rather than quiet little girls, it is only the part of wisdom, other things being equal, to grant them such children.

A careful preliminary inquiry will sometimes reveal many things about the foster parents' own lives as children that will explain their preferences. We may thus decide whether their preferences would make for intelligent handling of children or otherwise (69). When foster parents are told, as they should be, that a child has a particular behavior problem, it is sometimes easy to see whether or not they are the proper foster parents to handle that problem. A foster parent may say, for example: "That's too bad he has been stealing. I wonder if he has been having an allowance. I remember how that used to bother me when I was a child. I shall always be thankful to my mother that she tried to make it easy for me to be honest even though an allowance for me must have taxed her budget." That person is probably more fit to handle a stealing problem than the one who says: "You say he has been stealing? Oh, dear, that's awful! Well, I'll certainly try to see to it that he has no chance to steal anything while he is living with me." Sex behavior, when reported about a child, simply overcomes some foster parents (as, indeed, *own* parents likewise). Other foster parents accept such problem behavior as a point on which the child needs help in the growth process and do not express any more emotion about it than about any other maladjustment a child may display.

We cannot say that a foster parent who obviously cannot deal adequately with one kind of problem is therefore no good as a foster parent for any kind of child or any kind of problem. Own parents certainly handle some situations more skillfully than others, but they are in the position of having to meet whatever problems arise with their own child. In this respect, foster parents, even though also limited in their skills, have the advantage, since they can be chosen with these limitations in mind.

Another matter of great importance that needs to be forecast, if possible, is the foster parents' willingness and ability to admit both the agency and the child's own parents into the total relationship picture. Some foster parents tend to identify so closely with the child in their home that they cannot share this relationship and therefore more or less unconsciously try to exclude the case worker and the agency from plans for the child. This difficulty sometimes involves unwillingness to use the services of the agency's physician or inability to accept clothing allowances or habit-training programs recommended by the agency. It is true, of course, that a good foster home, if it has any degree of permanency, will eventually take over more and more responsibility and initiative. Increasing acceptance of the foster child as a member of the household, increasing confidence in understanding the child, and increasing security in foster parent-child relationships is to be hoped for. This, however, is very different from an initial jealousy which is afraid to share the child with the agency or with anyone associated with his past life.

We need to know the foster parents' attitudes toward the child's own parent or parents, if they are living. A good foster parent hopes that eventually, in the best interests of the child, he can be reunited with his own family. Where there is any possibility of this, the good foster parent will be glad to help the child keep alive his contacts with his family and will coöperate in arranging visits from the child's parents at which time the parent and child may be alone together. In many cases, it seems better not to have such visits until the child has somewhat adjusted himself to his new mode of living and will not be torn between his comfort with the new and his desire to return to the old. Sometimes the natural parents are selfish or jealous and make it hard for the child to accept his new parents. In such cases, if it becomes evident that adjustment to the new home is harder for the child after each visit from his parents, it may be necessary, in the interests of the child, to ask that the visits be discontinued.

The home of the foster parents. There are other factors in the choice of *foster parents* all of which can perhaps never be reduced to the generalizations of an application blank or to a routinized office procedure of investigation (4, 41, 71). There are important items also in connection with the more physical side of the foster home. Some states license boarding and foster homes through the State Department of Social Welfare upon the recommendation of a recognized child-placing agency. In some states, this license must be renewed each year.

The location of the foster home as regards health hazards, opportunity for education, recreational facilities, and neighborhood influence is most important. Cleanliness is essential but should not be a fetish which makes living uncomfortable for all members of the family. Some state laws and almost all social agencies require that each foster child be provided with a bed to himself.

Play space and things to play with, including pets, usually rate high in determining suitability of a foster home. Personal possessions and a place to keep them that is respected by other members of the household would seem to be the right of every child whether in his own home, a foster home, or an institution.

Standards of living, ideals, and aspirations of foster parents are matters of great significance. Not only do we wish that they be desirable, but we also try to be sure that the child under consideration will be able to adjust to these conditions. Where, for example, the educational achievements and ideals in a home are exceedingly high, there may be a question whether a child of average or below-average intelligence will be rightly understood. On the other hand, if a home gives evidence of never having coöperated wholeheartedly with the schools in matters pertaining to the education of own children, or where foster parents brag about their ability to get along in the world even though they "never had any education," we might question whether such a home is desirable (13, 73, 80).

Social standards in the community that are high but at the same time flexible enough to admit a small stranger, about whom no one knows much, and who must therefore be accepted for just what he is at the moment, should be thoroughly investigated. Two instances come to mind where such investigation was either overlooked or else the negative factors could not be avoided even though they were devastating to the foster child. One was in a rather high-class neighborhood that had considerable civic pride. Two or three homes were found in the community that were willing to accept foster children. By virtue of there being several siblings placed in one or two of these homes, there were in the neighborhood and in the school a total of six or eight foster children. Unfortunately, the other parents round about were unwilling to take any chances on the associations which their children formed and therefore firmly forbade their children's having anything to do with the newcomers. Whether or not these parents were right in their solicitude about their children's friendships, the fact remains that, so far as the foster children were concerned, the placements were far from satisfactory. The other case was a family of six siblings, which anyone will admit presents serious placement problems, particularly if we wish to avoid separating the children. The conditions of neglect under which these children had been living in their own home were so bad that, among other things, the children had to have their heads shaved in order to get rid of pediculosis. Finally a home was found which was willing to take all six of these children in spite of the conditions from which they had come. This home was in a somewhat restricted residential area and had superior standards of table service, etiquette, and respect for the rules of hygiene. One hopes that these excellences were not thrust down the throats of the six pathetic little creatures faster than they were able to assimilate them. One wonders what happened the first few days when the six strangers with their shaved heads entered the rather small school, where the other children had known each other always and had come from homes of about the same superior caliber.

Many agencies stress the religious attitudes and affiliations of foster homes and feel that religious training and Sunday School and church attendance are supporting factors which should be offered to a foster child. The psychologist might not question this view when a child has been reared in a religious home from the beginning. A question might arise, however, as to the extent and the speed with which a child can adjust himself to religious training in a foster home if it has never before been a part of his life. On the same basis, we might ask how soon a child who had been accustomed to disorder, filth, or everyone's eating when or where he pleased could adjust himself to insistence on orderliness, cleanliness, and social niceties at the table. The values to a child of prayer or repentance depend largely upon the attitudes, habits, and experiences which he may have had over a long period of time. They, therefore, probably fall short of the mark when superimposed upon an apperceptive background quite unprepared to profit by it. If a child has come from a home where certain feast days are observed, certain church rituals have always been performed, and certain food regulations have been enforced by the church, it is only fair that in foster home placement he should not be asked to break with these traditions. It is for this reason that psychologists would prefer to have Jewish children placed in Jewish homes and Catholic children placed in Catholic homes. By the same token, of course, a foster home placement should not put a burden upon a child by a change to a new language, nationality, or race.

To say that normally a good foster home should be one with both a father and mother is to invite still further individual exceptions. Every worker in child-placing agencies can probably think of a widow who did an exceptionally good job, perhaps with a boy whose antagonisms to his father would not have permitted a satisfactory adjustment, for the time at least, to a substitute father. Or again, one may have heard of some kindly and understanding, unmarried school teacher with many years of experience with children, who has done excellently in untangling the snarls from the life of a foster child without the aid of a man in the home. Some children thrive best in foster homes where there is a large circle of foster relatives who accept the child and help him to widen his social relationships.

The foster child himself. Perhaps it is somewhat artificial to discuss foster parents and the foster home before we discuss the foster child himself, particularly since most of the factors which we have considered are good or bad only insofar as they are good or bad for the particular child whom we have in mind (3, 20, 29, 61, 65, 76, 81).

The possible combinations and permutations that arise out of differing experiences and differing intellectual and emotional constitutions of any one child defy mathematical calculation. It is for this reason that we have taken up first the more obvious and more easily predictable factors about the foster parents and the foster home. The foster child still has to be placed on the basis of his own individuality and his own experiences rather than by any rule of thumb. As Mary Sayles (73) says: "From the moment of birth to the end of his days he is always, to himself, the center of a network of human relationships. And for the foster child, this network is essentially different from that of the child in his own home." For this reason, there is no guarantee that we shall ever be able to avoid all mistakes in foster home placement.

Because of these complexities also, it is very hard, try as we may, to be sure that either the foster family or the foster child is properly prepared for the experience. A skilled case worker who has studied the child carefully usually knows some of the things which the child craves and the things which appeal to him. She may explain to him that he is going to a home where these things will be provided. Sometimes, if the heartache is not too great, the child may be appealed to by the new clothes which he gets before entering the foster home or by the trip that is required to reach the new home. There are many ways by which a good case worker can build up pleasant expectancy or, at least, can remove some elements of fear from the child's thinking. She can also have planned in advance with the foster parents just what time of the day the child is to be received, what the family would best be doing when the child arrives, what members of the family should be present, and what should be the kind of reception to be given the child.

In spite of our best efforts, we cannot always know the feelings which the child takes with him to his new foster home. The child may be so frightened by the dread and the strangeness of it all that he feels he cannot live through it. In other cases, the child may be so overwhelmed by the terrific experience through which he has lived prior to placement that *anything* else is better. On the other hand, it is no surprise to the psychologist that many children removed from abuse, neglect, or deprivation become homesick for the old and actually prefer it to the socially better, but nevertheless unknown, new. They may run away and go back to the old. Some behavior problem children, however, respond favorably to foster home care from the first, either because they have found a new security or because they welcome the opportunity to take a "fresh start."

As a general thing, we should prefer to place siblings in the same foster home. Even this rule may, however, have to be excepted in individual cases where it may seem best, temporarily at least, to give siblings separate and specialized placement. As a rule, the presence of more than two or three foster children in a home, unless they are siblings, makes the home take on the aspects of an institution and is to be deplored. If a single child is to be placed in a home where there are any other foster children, as great care as our knowledge permits must be exercised in determining whether these particular children are the right age, the right sex, and the right disposition to complement rather than complicate each other.

Psychiatrists and psychologists do not agree among themselves as to optimum age for foster home placement or for adoption. Rather than enter into all the discussions on this point, it seems safer to say that there is no age which may not be right for some child and wrong for another child. As in most of the other subtleties, finesse would seem to require individual consideration rather than knowledge of theoretical arguments.

Children in Institutions

Kinds of institutions. We cannot go into details as to differences between institutional care for dependent, delinquent, and other classes of children (1, 4, 15, 18, 26, 28, 43, 58, 71, 82, 83, 87, 92). Selection of institution is discussed at several other places, and delinquent children as such are considered in Chapter XIV. There are, however, some matters which must be considered at this point.

For one thing, we note that, at present, there is a decided trend away from institutional care. As already indicated, more children are being cared for in their own homes. The White House Conference Report (92) stresses particularly the increase in the use of boarding homes and other forms of family care, and also better policies of institutional intake and retention; change from the old-time, congregate institution to the cottage plan; and the movement of institutions from crowded city streets into the suburbs.

Oberndorf, Orgel, and Goldman (62) say that of dependent children admitted to institutions "an ever increasing percentage is made up from children whose parents have separated." They further state that orphans are decreasing in number because of "increasing longevity of the population in general," "decrease in immigrant population," from which large numbers of siblings were formerly institutionalized on the death of their parents. Perhaps only statistically trained sociologists can adequately evaluate these statements. (49, 50).

Unfortunately, some institutions are still dependent upon moneys frozen in outmoded technicalities. One still sees institutions going under names that would make any child hesitate to enter, or to admit later in life ever having lived under their roof. Some children's institutions are still managed by wealthy and influential board members who are not willing to sacrifice historic name or give up ancient practices. Social work and psychological service in such cases must be difficult in the extreme.

It is necessary to distinguish between institutions which provide only custodial care on the one hand and institutions designed to provide treatment or education on the other hand. Institutions for the feeble-minded partake largely of the nature of the first of these (47).

However, most such institutions have an educational program for those children who are able to profit by it. Many children of very low degrees of intellect, however, cannot be educated, but do need physical care twenty-four hours a day. There are other children with very extreme mental disturbances, whose behavior is so anti-social that, at the present time, we are better able to provide custodial than therapeutic care. Milder behavior disorders we like to think of as being amenable to re-education, and for this reason we send such children to "training schools" (6, 7, 51, 67). If one is inclined to be realistic about the matter, he must admit that many so-called training schools really do little else than provide custodial care. It must be carefully noted that such is not the case everywhere. Many institutions have competent psychiatrists, psychiatric social workers, and psychologists on the staff. There are some training schools which admit children to a reception cottage presided over by psychiatrically trained men and women who make very careful studies of incoming boys and girls before individual institutional plans are decided upon.

Changes in institutional care. While certain difficulties which appear to be unlikely of solution are inherent in institutions, yet it is encouraging to contrast some of our better institutions of today with almost any institution of 20 or 30 years ago (15, 18, 87, 93). Many of our better institutions allow children, with help, to choose their own clothes, and train the girls to make their dresses as they choose. Surely we are past the day of uniform dress! One orphanage known to the writer allows the boys to go to the edge of the farm, put up tents, dig caves, set steel traps, and do many of the other things that boys so love to do. Many an institution cottage has an occasional party and some have cottage pets and birthday cakes. Some institutions allow the children, if at all possible, to go to nearby churches of their own particular denomination, and many encourage increasing independence by occasionally permitting some of the older children to make trips, unaccompanied, to a nearby city.

One of the most significant changes in institutions is the *cottage system.* The cottage system provides a regimen that is much more nearly comparable to family living than the old congregate institution plan. Some institutions put children of different ages in one cottage, hoping thereby to simulate a family situation as nearly as possible. In some orphanages, sisters are put in the same cottage and brothers are put in the same cottage. Very few institutions as yet have had the temerity to mix the sexes within one cottage unless it be in the "baby village." Sometimes we find certain cottages designated as *honor cot-*

tages and others which are used as *discipline cottages.* The cottage system probably has everything to recommend it as over against former housing plans. However, even the best cottage system still denies children *privacy,* a thing which all children need to some extent and many need to a great extent.

The value of the cottage plan depends largely upon the competence of *cottage fathers* and *cottage mothers.* All too often these persons are chosen for reasons other than their understanding of children. Many institutions are in rural districts. In such cases the wives of the men employed to work on the farms often become house mothers more or less regardless of fitness. Sometimes the husband may be a teacher or engineer in the institution, and the wife is a cottage mother. Some institutions employ mothers of the children who are in the institution. Often in girls' cottages a woman is employed as house mother because she knows something about large-scale cooking rather than because she knows anything about girls. If, as we have tried to show previously, the influence of the real father and mother and of the foster father and foster mother is important, certainly in the same way the cottage father and cottage mother should be chosen with the greatest of care and with the utmost regard to the qualifications of real substitute parents. Institutions would, in the end, probably return more to society if their budgets were expanded to employ professionally trained persons for the key positions which have direct contact with the children.

Institutional handicaps. It is to be regretted that many institutions make no attempt to prepare the family or the community to receive the institutionalized child back into its midst when he returns. Much more field case work service is needed in this area if we are to expect a delinquent child, for example, to return to conditions which will make it easier for him to continue in whatever better habits he may have formed while in the training school.

Another difficulty about institutions is the *heterogeneity* of the children committed to their care (21, 28). In institutions for delinquents this is particularly true, and it is probably because of this that some children are actually worse off after institutionalization than before. Among institutional children, some are unstable, some are hysterical, some have incipient mental illnesses, and many have undesirable habits (27). Under such conditions it is difficult, if not impossible, to individualize treatment and care. The difficulties of individualization which the public school has to meet are manifolded many times in most large institutions.

Plant (66) calls our attention to a hazard which institutions for delinquents have to face. This is the fact that the delinquent has perhaps long been told that institutional placement would be "the last resort," and therefore upon commitment he knows himself to be a "failure." For many such children, the world has no doubt so completely crashed around them that there is no motivation for doing better. Any conformity to rules on their part may be a wooden kind of acquiescence which is nothing but the line of least resistance and does not represent a growth process in any degree.

One of the greatest difficulties which wise institution superintendents face is to make institutional training comparable to, and preparatory for, life outside. In the rural institutions already referred to, for instance, much of the work life of boys is spent in farm activities, even though the majority of these same boys will ultimately return to the city to live.

One of the social hazards which has caused many girls and still more boys to be sent to institutions for delinquents is theft. Stealing even within the institution is common, partly because ample provision is not made for individual belongings, with places provided where hearts' treasures may be safely kept. It is very hard for institutions to furnish opportunities for retraining in matters of honesty. For instance, many institutions provide no way by which boys and girls earn and spend money, and thereby learn something of its value. It must be noted that some fine institutions do make very definite provision for such experiences, however. The writer knows one orphanage which definitely devises ways by which the children can earn money (or its equivalent in credit). Each child has his own bank book. When a child earns something, this sum is added in his bank book. When he makes a purchase, as he is allowed to do, at the institution's store, the amount of his purchase is deducted from his account.

Institutions frequently have difficulty with problems of sex perversions of various kinds. Sex, as such, is discussed in another chapter and will not be taken up here except to say that sometimes institutions find it necessary to isolate children who are offenders in this particular. Where psychological and psychiatric service are available, causes may be discovered and removed (75).

Enuresis is sometimes spoken of as the bane of all institutions. One institution known to the writer had the pernicious practice of having enuretic children sit at the "soakers' table" in the dining room for punishment. The enuresis apparatus discussed in a previous chapter has been used with great success in some institutions. While it has been frequently noted that enuresis is especially common among delinquents, it is by no means confined to them among institution children (52, 53, 54). With younger children, the difficulty may be lack of habit training. In older ones, however, enuresis is more likely to be due to psychological maladjustment of one type or another. Healy and Bronner (40) suggest that it may be either a "masturbatory substitute, an attention-getting device, or a revenge phenomenon." Whether habit training, diet restriction, or emotional treatment is indicated depends upon the individual case. Here again, psychiatric and psychological services should be of great help (52, 78). (See also Chapter VI.)

Running away is another problem which most institutions have to face more or less frequently (46, 63). Some causal factors operate in institutions which do not operate, to the same extent at any rate, while the child is in his own home. O'Connor (63) lists dislike of maintenance work, protest against treatment, common method of meeting all unpleasant situations, suggestibility, love of excitement, desire to get back home to see what changes have occurred there, as causes in the boys whom he studied at the Children's Village, Dobbs Ferry. Another significant finding of O'Connor's study was that some cottages had as much as 60 per cent more runaways than other cottages housing similar groups of boys. In this institution as a whole, the yearly average over a 10-year period was 245 runaways a year for a population of 400 maladjusted boys. Even in the face of this record, one cottage mother had no runaways from her cottage for two successive years. One wonders how much institutional running away, with all its disrupting of routine and its dangers for the runaway child, could be prevented if there were more cottage mothers like this one.

One is sometimes amazed at the matters of individual identification which children who have lived long in institutions fail to know. The writer once worked with several hundred individual children in an institution and became increasingly disturbed at the number of these children who did not know their birth date or age. In view of the fact that each cottage had birthday cakes once a month for all the children who had birthdays that month, this seemed surprising. When the attention of the superintendent was called to the fact, he immediately took steps to insure that on each child's birthday he or she was instructed about his birth date and age. Printed slips containing this information were also posted in each cottage. Another case comes to mind of a child from an institution who has been in the first grade of the nearby public school for two years and still is not ready for promotion. It has just been discovered that there was an error in the record of the child's birth year and that she actually started to school a year before she should have done so. One wonders how she will ever get over the confusion, chagrin, and sense of defeat caused by this clerical error.

Institutional education. Education for institutional children presents its own problems. If the institution is small, it is difficult to provide individualized and specialized education without running per capita cost beyond the limits of a reasonable budget. In very large institutions, there is danger of lock-step educational programs that public schools try to avoid.

Some institutions for dependent children now prefer to send their children out to nearby public schools in order that their social contacts may be broadened and may be more nearly like those of children living in their own homes. In many ways, this would seem to be the preferable method. The disadvantages would appear to be on the side of the public school. It is not an easy matter for any school to absorb a large number of children with very heterogeneous academic, social, or moral backgrounds. Furthermore, after the common institutional quarantine has been lifted, the school is sadly put to it to help a large number of children at the same time to make up missed work.

Vocational education, or indeed any kind of specialized education, is next to impossible in any except large institutions. In many institutions, maintenance work becomes a substitute for vocational training. Laundry work in an institution can scarcely be considered training for domestic laundry work outside an institution. As already indicated, one of the frequent complaints made by runaway boys is their dislike for much of the maintenance work they are required to do (63). The line between occupational therapy, recreational activities, vocational training, and maintenance work becomes hopelessly confused in many institutions. Knitting stockings by hand may keep fingers busy, may or may not be enjoyable, but it is scarcely vocational preparation these days. Having girls work in the fields of an institution may be healthful; it may or may not be enjoyable; it may be helpful maintenance work; but it is surely not vocational training.

Recreation is a problem in many institutions unless they are particularly fortunate in both staff and equipment. Most institutions show moving pictures now. Incidentally, some use deprivation of attending the pictures as one of the chief means of punishment. Some institutions, for punishment, allow the culprit to *attend* the movie, but require that he sit with his back to the screen after he arrives there!

Some other forms of institution punishment are deprivation, isolation, head-shaving, and removal of merits. Questions might legitimately be raised regarding the psychology of many of these procedures.

Accumulation of *merits* by good behavior is a common institution practice. Parole or release, in institutions for delinquents, is often determined largely by the acquisition of a certain number of merits. Some institutions are now working on more individualized schemes of release, whereby a child is given a trial parole as soon as it is evident that there have been basic changes in his behavior, attitudes, and social adjustment. Obviously, such a plan presupposes actual treatment for the child, and adequate individualization of training and supervision.

Not all the points of psychological interest relative to institutions for children have been or can be discussed here; administrative problems, which often impinge upon the psychological, can scarcely be touched upon. For references to some of the other institutional problems which concern the professional worker and for other bibliographies, the reader may well consult the references already cited and the others in the accompanying list of selected references.

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CHAPTER IX

ADOPTION

Introduction

After having discussed in previous chapters the child in his own home and the child away from home, we should naturally consider next the child who goes into a new home *for life,* for better or for worse. There is no question concerning childhood that is more interesting to the layman than *adoption* (7). In the minds of most persons, there is so much mystery about it and such an element of chance that the topic intrigues popular imagination.

There has been considerable newspaper publicity given to the question of adoption. The public generally is interested in children. Whenever, therefore, the newspapers carry an account of an abandoned child or a child of misfortune, the unthinking often offer to adopt the child. Two cases of this kind come to mind. In the first instance, the police found a child several years of age (there was some question as to the exact age of the child) who was chained to a chair on an upper floor of a house. Investigation showed that the child had been born a number of years before to an unmarried mother whose father obliged her to hide the child so that no one in the community should know of its existence. The child was unable to walk or talk, but there was little opportunity of knowing, without prolonged study, the extent to which such retardation was caused by environmental deprivation or the extent to which the child might be inherently defective. The child was removed to a nearby almshouse, where letters were received by the score from people who wanted to adopt the child sight unseen.

Another more recent instance was that of a child who was abandoned in the washroom of a bus terminal. Considerable time elapsed before the police were able to get any clue whatever about the parents of the child. It finally developed that the father was serving a term in a penal institution and the mother, who was about to have another baby, had abandoned the "mystery baby." The child was put into the custody of the juvenile court, but it was necessary to remove him from the court detention home, partly to protect his identity from a curious public. The social worker who removed the child brought him first to the office of the writer for psychological services. The automobile that she was driving was literally full to overflowing with the gifts that had been sent to the child while he was in the hospital and in the court. For months, letters came from all over the United States, pleading that the writers be allowed to adopt the child. Fortunately, some valuable magazine articles and radio broadcasts have been prepared by professional agencies interested in bringing about more enlightened thinking on the subject of adoption (47, 51, 55).

What Children Are Adopted?

There is a distinction between *what children are adopted* and *what children are adoptable.* An attempt will be made to discuss the latter question in subsequent paragraphs. It is important to know, however, who the 16,000 to 17,000 children are, who are adopted in any one year in the United States (42). It is estimated that about two-thirds of them are illegitimate children (21, 29, 51). Many are foundlings, some are orphans, and some are children who have been subject to gross neglect. From one-third to one-half of the adoptions are by step-parents or other relatives. In spite of what seems like a large number of adoptions each year, there are still not nearly so many children actually adopted as there are applications from families wishing children to adopt (20).

Dangers in Unprotected Adoption Cases

It simplifies matters to say that children are adopted via the services of professional child-care agencies *or* they are not. Professional standards for adoption will be discussed later. In order, however, to justify the insistence upon professional procedures, it may be well to consider some of the things that happen when adoptions are negotiated by unlicensed maternity homes, physicians with no knowledge of social-work techniques (23), or courts with inadequate or no social investigations. Such adoptions have often been quite expensive from a monetary point of view, since some "adoption homes" have practically sold children to the highest bidder.

Many children have been adopted who were not, according to professional standards, adoptable. No adequate figures are available on the number of children legally adopted and subsequently admitted to institutions for the feeble-minded, although it is well known that there are such cases. Adequate preliminary investigation would have prevented the heartaches and economic waste involved in such instances. Cases of Negro parents who have been permitted to adopt white children are recorded in the literature on the subject. These children must inevitably be subjected to many embarrassing situations as they go through life.

Improvement in adoption laws in various states is tending to better adoption practices (2, 36). For example, a survey in Pennsylvania of conditions prior to 1925 (31) showed that children had been adopted by illiterate persons who had to make their "mark" on the adoption petition; that records of some adoptions had been lost entirely; and that often adoptions were consummated on the same day on which the petition was filed, thus permitting no social investigation whatever. Some children were found to have been adopted by "deed" and to have been transferred in much the same way that property is transferred. Because of the lack of uniformity in adoption laws throughout the United States, it is possible in many parts of the country for parents to go into another state and adopt a child or to bring a child in from another state for adoption. Such procedures make adequate investigation next to impossible. It has been known that parents with criminal records, for example, have been allowed to adopt children.

In some courts, the hearing on the adoption petition is held in open court rather than in chambers, and in some the natural parent is required to be present at these hearings. In small communities, particularly in the adoption of a child of an unmarried mother, the local interest and gossip accompanying such a procedure makes it hard for the natural mother to adjust herself in the community. Unwarranted publicity to the adoption may also interfere with the child's building up proper relationships in his new home, and, furthermore, it may give the natural mother too much information about who the adopting parents are. Unless proper care is exercised, the adopting parents may not be given security from interference by the natural parents. After an adequate investigation has determined that, in the best interests of the child, he should be adopted, then certainly no factor should be allowed to arise that will prevent his complete identification with his *new* parents. One instance at least has been reported in which, after adoption had been consummated and the child had begun to take root in his new home, he was actually kidnaped by his own mother who had previously agreed to his adoption.

Where rigid investigation and case-work planning are neglected, great dangers can arise by the adoption of one sibling only, or by the adoption of one sibling into one family and another sibling into another family. In the first of these instances, social and economic inequalities are liable to be the lot of the siblings. The child who is left, perhaps in an institution, while his sibling is adopted, may feel discriminated against. Furthermore, the unadopted child may know that his brother or sister has been adopted, even though he may not know where; while the adopted child, if younger, may never know that he had any siblings. Two stark examples occur to the writer. In one case, the brother who was left in an institution knew that his sister had been "adopted by a wealthy family." He somehow found out where she was. He would scan the society columns of the paper and clip all references to his sister while she was attending private school and later when she made her debut into society. He would go to the gate of the school and stand waiting to see her come out every day, longing to speak to her and to make himself known. One can imagine the tragedy to both of them if he ever does identify himself, particularly if she does not know she is an adopted child.

In the other case, several siblings, on the death of their parents, were put into an institution. There was a considerable age range among the siblings. Finally the baby was sent away from the institution, and the older children were told that she had been adopted. There is no evidence that much attempt was made to establish a home for all these siblings together, even though by that time the oldest brother gave evidence of being a reliable and dependable young man. Soon he secured work, became self-supporting, and married. He was determined to find out something about his baby sister. Repeated inquiries at the office of those who had assumed responsibility for the children yielded him conflicting stories—that she had been adopted, that she had not been, that no information would be given him. Finally, after he had been married for a number of years and had a fine twelve-year-old daughter of his own, he was called by the individuals from whom he had failed to get information previously. They announced that they had found his sister and would like him to come to see her. He went immediately and found a girl who looked like a person of another nationality and who had been arrested in a house of prostitution the night before. Believing what he was told, he supposed that of course she *was* his sister. In spite of the unfavorable circumstances, he took her home with him. He and his wife clothed her and attempted for weeks to make a satisfactory home for her, although her behavior in the home was not a very fine example for their adolescent daughter. When matters became so involved that he felt he could not keep the girl in his home any longer, he started an investigation. It was discovered that the girl was grossly defective intellectually. None of the siblings were defective. This fact and the strong suspicion about nationality made the man quite sure that the girl was *not* his sister. A more pathetic emotional conflict would be hard to imagine than that experienced by this man. He was conscientious in the extreme and he felt that any sacrifice that did not too seriously interfere with his duties to his wife and child should be made for his *sister,* but he did not know whether this feeble-minded, immoral girl *was* his sister. This separation of siblings occurred some twenty or more years ago, when child-care services were not so good as at present. Probably no one ever will know whether this tragedy is an example of poor adoption practice at that time or whether it is an example of poor case work without adoption, because, to date at least, no one has been able to determine whether or not the real sister had ever been adopted, or who this girl really is.

Considerable newspaper publicity was given at one time to the case of a young man and a young woman, both adopted, who married each other only to find soon after that they were full brother and sister. Such cases are probably extremely rare. The protections that child-care agencies throw around their adoptions tend to reduce unfortunate adoption outcomes to a minimum.

It sometimes happens that a child takes his place in an adoptive home and stays on indefinitely, but without legal adoption being consummated. For one reason or another, such children are often turned back to child-caring agencies. Such situations probably would not arise if the original placement were made by a professional agency. Such an uprooting may be as serious for a child as removal from his own home would have been. It is natural that prospective adoptive parents complain about the time required to secure a child for adoption. The fact remains, however, that study adequate to insure *proper* adoption *requires* time.

Services of Children's Agencies

It is often said by professional case workers that no phase of casework service for children requires more professional skill than work in the field of adoption (3, 8, 18, 28, 30, 33, 38). Professional agencies look upon adoption as a very serious procedure that cannot be handled lightly. For this reason, they throw around adoption the protection of a most thorough investigation of the child who is being considered for adoption, of his family background, and of the parents who wish to adopt the child. They call in experts in the fields of genetics, pediatrics, psychiatry, and psychology to help them evaluate the child and the adopting parents. Many agencies that do adoption work are scrutinizing their own practices and are asking themselves such questions as: "Are we making our requirements so high that they are theoretical rather than practical?" "Are we being so severe in our standards that we are driving applicants away from us and into the 'bootleg' field of adoption instead?" "Are we going too far in requiring a certain degree of intelligence in a child before sanctioning adoption, thereby depriving too many average or slightly below average children of a chance for a good adoptive home?" "Do we make sufficient preliminary investigation *before* thinking of adoption for a child, or do we *begin* by assuming that every homeless child is a candidate for adoption until he is proved otherwise?" "Can we formulate, so as to encourage more uniform practice, genetic, pediatric, psychiatric, and psychological minimum standards for adoption?" "How can we encourage natural relatives, particularly the mother of a child born out of wedlock, to see the value of giving all the information that we really need in order to make a successful adoption?" "If we find some negative factors in the background of a particular child, have we done our duty by passing this information on to the prospective adopting parents?" "Should we let *them* decide whether they want to take the chance, or is such a decision a part of *our* responsibility and professional prerogative in deciding whether or not a child should be adopted into a particular home?" The more one ponders such questions, the more convinced he probably becomes that adoption, like every other phase of work with human beings, is in the end largely a matter of individualization. There are certain minimum standards upon which there is considerable agreement among professional workers. On other points, however, no hard and fast rule or legal enactment will exactly fit every individual case.

In cities of any considerable size, there would seem to be merit in maintaining, through a central confidential exchange, lists of children suitable for adoption and lists of homes wanting children for adoption. Valuable information could no doubt be secured from such a source; duplicate investigations of adopting homes could be eliminated in large measure; and the right child for the right home might be found more often than at present. Such complicated cases as *Negro Catholic children,* for example, might, through the information furnished by such a confidential exchange, be placed in suitable foster homes, but they might not find adopting homes through the services of one agency alone.

Study of Adopting Homes

Much of the investigation needed in evaluating adopting homes is similar to that which we have already discussed in relation to the investigation of foster homes (17). The study of adopting homes should be more intense; it should be made with a view of determining the desirability of the home for permanent placement of a child (6). Most agencies, for example, desire evidence of economic security for an adopted child; they ask adopting parents to take out insurance for the child. Ability to carry adequate insurance is one measure of parental attitude as well as of economic fitness.

The age of adopting parents is also of somewhat different significance than in the case of foster parents. Adopting parents should be young enough not only to be sympathetic toward children's interests and activities, but also to be emotionally and physically competent for child rearing for the entire period of the child's immaturity.

The desire of *both* husband and wife to adopt a child should be determined before adoption. There should also be agreement on *the* child that is to be taken into the home. It is a common experience of child-placing agencies, however, to find that one spouse may want a child of one age or sex while the other spouse wants a child of different age or sex. Very often, in such cases, if the man and woman really *want* to adopt a child, the trial period of *a* child in the home smooths out the disagreement, and the husband and wife agree on wanting *this* child. For many reasons, this trial period before final adoption is an essential safeguard to both child and parents (8).

Study of Children for Adoption

One of the problems that puzzles professional workers is the question of the optimum age for the adoption of children. On the one hand, there is the fact that far more adoption calls come for infants. One can see why this is true. Many adopting parents want the joy of having a little baby to care for. Furthermore, they may feel that if the child is to be theirs, they prefer the break with his past and his own home and relatives to be made as early as possible. They may also be anxious to begin *their* kind of care and training just as early in life as they can (3, 16, 18, 32, 38).

On the other hand, there is a serious question about *infant adoption,* and that is whether we can know enough about an infant to say that he is suitable for adoption. The younger the child, the less able we are to evaluate him. Obviously, the more we know of his family and his background, the more likely we are to feel that he is or he is not adoptable. In the absence of an adequate social history, however, we feel that more and more detailed medical, psychiatric, and psychological evaluations must be made of the infant and his forebears. Many agencies place the infant in a study-home, where careful observations can be made (46). In any case, even when there is reason to think the child is adoptable, the trial period of six months or a year in the adopting home is asked by most agencies before final adoption is allowed to go through.

Age offers another knotty problem aside from matters of adequate determination of the fitness of the child. The age at which a child can best break with the old and identify with the new has bothered psychiatrists considerably. The different opinions on this point that the writer has read and heard from different psychiatrists leave her with the distinct impression that there is no uniformity of opinion on the question, and perhaps it had better be settled on an individual basis.

Perhaps a word need be said at this point as to the adequacy of psychological tests for infants prior to adoption and the necessity of psychological service for own and for adopting parents. After a number of years of close connection with several case-working agencies doing adoption work, the writer has had occasion to formulate her own position as follows on psychological service in adoption work.

Psychological Services Prior to Adoption

Ideally, what the psychologist should like in order to assure himself of the suitability of a particular adoption would be (1) repeated and varied psychological tests of the child himself; (2) at least one adequate psychological inventory of each of the own parents; (3) as many psychological data as possible relative to the child's siblings; and (4) at least one adequate psychological inventory of each of the prospective adopting parents.

For obvious reasons, an examination of own parents is not always possible. When such is the case, the necessity for an adequate *social investigation* of the real parents becomes more imperative. It would seem essential that some estimate of the intelligence, personality, and emotionality of the prospective adopting parents also be secured. Much of the social investigation made by a qualified case-working agency, however, gives information relative to the prospective parents that may in some cases be substituted for a formal examination by a psychologist.

As for the child himself, the psychologist asks that the required information include (1) psychological test results, (2) record of developmental history, and (3) for children of school age, educational history.

In regard to tests of intelligence, it is probably safe to say that the information that they supply at the hands of a capable psychologist is more valid and more reliable than estimates arrived at by unstandardized judgments of untrained observers. However, it is necessary to make a distinction between the validity and the reliability of intelligence tests for very young children and the validity and reliability of intelligence tests for children of age two and one-half or three years and over. Psychological opinion differs as to the predictive value of test results obtained upon children during the first year of life. Most authorities feel, however, that, although tests administered during the first year are considerably better than mere lay opinion relative to the mental development of an infant, they are for several reasons not highly predictive of future intelligence. Among the factors tending to invalidate the predictive value of tests administered to children during the first year are the following: varying degrees of prematurity or postmaturity among infants of the same chronological age; an apparently irregular rate of growth during the first year; very rapid rate of early mental growth; emergence of new functions at various times during the first year or two; the large amount of muscular activity in the child's behavior; health and training; and many other factors. Although a good quantitative measure of intelligence, expressed as a quotient, cannot be secured for a child during the first or perhaps even the second year of his life, yet a capable psychologist experienced in this field can, in relative terms, give an estimate of how a child compares with other children of his own age, even though he is not willing to say how the child may develop later. However, the psychologist may feel that he is able to distinguish between markedly advanced and markedly retarded children during the first and certainly during the second year. On the basis of these findings, the psychologist may be willing to recommend or to withhold recommendation for probationary placement prior to adoption. He will undoubtedly ask for several subsequent examinations of the child.

During the latter half of the second year of life, social and language factors are beginning to emerge in the child's repertoire. Testing becomes both easier and more reliable. By the time a child is three years of age, most psychologists feel that the reliability of test results enables them to make predictive statements—of course with the same reservations that always apply to the use of intelligence-test results. The scores and quotients obtained by the use of current psychological tests for children from two and one-half or three years and above appear to be, under ordinary circumstances, statistically reliable and predictive for purposes of adoption.

Adequate psychological testing demands that a variety of tests be administered and that, if at all possible, these tests be repeated for children of any age. For very young children, repeated examinations should be given at six- or nine-month intervals throughout a study period of a year, or year and a half, or sometimes longer. In addition to *linguistic intelligence tests,* adequate psychological examination includes *performance* and perhaps *social* and *personality tests,* as well as a study of the child's emotional life.

A developmental history of the child, regardless of age at the time he is being considered for adoption, is necessary. The additional evidence supplied by such facts as age of sitting alone, standing, walking, teething, talking, and establishment of toilet habits must be evaluated along with numerically expressed test results. This developmental record should also include a health history. In early life, prolonged or serious illness may interfere seriously with development and must, therefore, be included among the evaluating factors. Institutionalization likewise retards certain motor, social, and personality developments. Any institutionalization that the child may have experienced must always be considered in evaluating his behavior and test performance.

In the case of older children, the psychologist should be supplied with as many data as possible in regard to the child's school history and progress. Any standardized tests that may have been administered by the school should be reported to, and evaluated by, the psychologist; they may aid in interpreting the intelligence-test findings.

It should be borne in mind that, if the psychologist examines the child with a sufficient battery of tests and with sufficient repetitions, he will be able to provide the agency with not only numerical evaluations but also additional *impressionistic* judgments which, though subjective, may be valuable, nevertheless. During a psychological examination, clues are often picked up that may indicate the need of special physical or psychiatric study or that give other valuable information.

Good adoption principles seem to demand: (1) that a child for adoption be placed in a home to whose standards he will probably be able to conform; (2) that prospective adopting parents have at least average intelligence; and (3) that there be parity between the intelligence of the adopting family and of the child to be adopted. Most psychologists, therefore, would never recommend the adoption of definitely feeble-minded children. In fact, there is a question whether even dull children should be placed for adoption. If a dull child were to be adopted by members of his *own family,* less harm might result than if a dull child were to be adopted by non-related individuals possessing average or above average intelligence themselves. Children of average intelligence will, other things being equal, be recommended for adoption into homes where the intelligence of the prospective parents and other children in the home is about average. Children with superior intelligence should be placed only in homes where there is superior intelligence (3, 18, 38).

As to the investigation of a child's heredity, we cannot go into detail here. Chapter II has already discussed many of the problems one may meet in adoption studies. Further reference may be made to the study by Lippman (27). Dr. Lippman secured opinions from thirty psychiatrists on certain questions of heredity of feeble-mindedness and psychoses; and of the influence of serious delinquency, bizarre behavior, or sex irregularities in the child's family background. It is interesting to note that the amount of agreement among these psychiatrists was not great; that many admitted their dependence upon "hunches"; and that in many instances the psychiatrist preferred to answer the specified question in terms of the individual case rather than by rule.

It may be well to remind ourselves that the geneticist can tell us some things that are definitely inherited. On some other things, the relative contribution of heredity and environment is quite undetermined. Furthermore, we should bear in mind that one negative factor in both maternal and paternal lines is much more serious than two instances of the same negative factor in one ancestral line. It is easy in adoption work, just as in one's own family, to stress heredity to the point of losing our perspective. It should always be borne in mind, furthermore, that the more adequate the social investigation made by an agency with a highly trained professional staff, the less serious is the absence of any one particular line of evidence. The writer must confess, however, to a personal unwillingness to favor adoption where absolutely nothing is known of the heredity of a child, even though examination of the child himself gives him satisfactory medical, psychological, and psychiatric ratings.

Enough of the child's history should be passed on to adopting parents that they will be intelligently secure in their feelings about the child they are taking and will be able to give the information that the child should have and for which he will probably some day ask. Here again, just *how* much information should be given to adopting parents and just *how* much they in turn should give to the adopted child will depend upon what the individual case requires for the constructive ends of security and growth.

When a professional agency has made a study of the child, of his family, and his adopting family, and when this study seems to indicate the suitability of the child for this particular adoption, the agency will then ask for a trial period, as already indicated. At the conclusion of this time, if it is desirable that the child be adopted, the agency will work through, with the adopting parents, the necessary legal procedures (34, 37). After the adoption has actually taken place, most agencies see that the child's birth registration in the bureau of vital statistics is changed as of his new status. This is a point that the writer has never been able to accept and about which there is some reasonable doubt. Changing birth records is not giving the *truth,* which is usually the safest course to pursue. If the child is to be told about his adoption, as is recommended always, then there would seem to be no reason why his real name and parentage should not be made available through state records if he should ever need them for legal or other reasons. After the adoption has been legally consummated, the social agency withdraws entirely, in order that the family and child may build up their own intimate relationships without let or hindrance from any outside source.

Safeguards for the Child Who Is Adopted

In a sense, everything that we have discussed is with the idea of safeguarding the child. Whatever safeguards the adopting parents directly or indirectly safeguards the child whom they adopt also (43, 44). However, at least two other points should be made in regard to the child himself. It is perhaps safe to say that no child should be permitted to come up for adoption until it has been determined that every possible means of maintaining satisfactory possibilities for growth with his own relatives has been tried. Kinship ties have a value that cannot lightly be cast aside. The opportunity of growing up with siblings, of retaining contact with aunts, uncles, cousins, or grandparents should definitely be proved to be lacking or altogether inadequate before they are sacrificed.

Another matter upon which professional workers are agreed is that adopted children should grow up in the full knowledge that they are adopted. The chances of keeping such knowledge from adopted children forever are almost nil. Some people would even question the fitness of parents to adopt a child if they felt so insecure as to be unwilling to risk telling the child that he had not been born to them but that they had brought him into their family because they wanted him. When children are adopted before they are old enough to remember the circumstance, the story must be told them gradually, in small amounts, and repeatedly, just as we give little children information about death, religion, where babies come from, or any other complex matter that they cannot comprehend at one time and about which we are anxious that they develop proper attitudes. The shock of delayed discovery of one's adoption is too drastic and too often accompanied by severe emotional trauma for us to do other than strongly recommend that the child be brought up in the full knowledge of his adoption. It might be added that some adopting parents make the same kind of sentimental errors in overemphasizing the "chosen child" idea that own parents make sometimes in giving instruction in sex hygiene. In either case, information should be factually correct, beautiful without being gushingly sentimental, and, above all, should be the source of an abiding confidence (5, 45, 56).

One other matter must be mentioned. It is unfortunate that in some communities there is a kind of hostility against, or at least an unwillingness to accept, an adopted child into the home or social relationships of other children in the school or community. The writer has known of several such instances where the public sentiment against "a child that nobody knows anything about" was so strong as to make it seem advisable for the adopting parents to move to another neighborhood. The school might be able to help at this point and indeed has done so in some instances.

Adoption Laws

Mention has already been made of the fact that adoption practices vary from one state to another (16, 20, 22, 34, 37, 51, 52, 53). Rights of inheritance, adoption by spouse of natural parent, consent to particular adoption, or blanket consent for adoption are some of the questions which interest professional workers and which are not adequately safeguarded in all states. In the formulation of laws regarding paternity, illegitimacy, and adoption, both the discouragement of illegitimacy and the best interests and security of the child and its unmarried mother must be kept in mind (57). Some of the adoption projects now being conducted by the Child Welfare League of America, the

United States Children's Bureau, and by a great many local social agencies are considering all such problems (2, 8, 16, 17, 20, 21, 33, 34, 37, 47, 51, 52, 53). It is to be earnestly hoped that the day will soon come when the best provisions from the standpoint of all concerned will be made equally available throughout the entire country. Then we may hope for an increasing number of desirable adoptions.

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Chapter X

THE CHILD'S EMOTIONS

Lifelessness of Textbook Discussion of Emotions

There is perhaps no topic in psychology that has accumulated more theory and has effected less change in behavior than *emotions.* The writer has been amazed again and again in conducting advanced classes in psychology to find that many students trained in the orthodox elementary courses do not recognize any *personal* acquaintance with emotions whatsoever. In fact, one is led to wonder whether their courses, their textbooks, and their laboratory assignments have not taken all the *flesh and blood* elements out of emotions. Sometimes these students are not sure whether one is conscious of emotions or not. They are at a loss when asked whether they *know* they are sad when they are, or whether they have to be told by someone else when they are joyful, or anxious, or angry. Textbooks have given detailed descriptions of facial appearance during violent emotion, and endless discussion has concerned itself with attempts to list and classify emotions. Such discussion of emotion, however, has done little to help individuals with their own emotional problems.

Our Ignorance in Handling Children's Emotions

Many teachers, parents, and others trained from the older didactic textbooks may know much of the theoretical and experimental material on emotions and yet go about arousing negative emotions in the children whom they meet. A very popular textbook in child psychology devotes *six and one-half* pages to a discussion of *anger* in children. Of this space, *twelve lines* have to do with prevention, consequences, and treatment! The same author discusses children's fears throughout six and one-half pages, of which only one and one-half pages are concerned with prevention and treatment. Textbooks and laboratory courses have not taught us yet how to rear children so that by the time they reach adult life they can produce and enjoy upbuilding emotions and can eschew negative and debilitating ones. Many adults either still do not know how to avoid embarrassing children or else they deliberately do so. They either do not know how to find out a child's sore spots and step gently thereupon, or else they really enjoy opening the wounds and putting salt on them. A teacher once said to the writer: "I suppose children *do* bring their own worries to school with them just as we teachers do. I never thought of that before." In a later chapter we shall have more to say about the role of emotions in producing conduct disorders.

Individual Differences in Emotions

Emerson has said that we boil at different degrees. This is a poetic way of expressing *individual differences* in emotions. It is at this point that we encounter one of the two most important classes of individual differences—*intellectual* and *emotional* differences. Individual differences in height, weight, musical ability, physical endurance, rate of tapping, speed of reading, accuracy in mathematical calculation, or speed of typing are as nothing, in social and psychological significance, compared with individual differences in intelligence and in emotional reactions. The matter of intelligence we shall discuss in another chapter, but individual differences in emotions are pertinent at this point. The range of individual differences in such matters as the stimuli that arouse anger, hate, love, joy, fear, embarrassment, or mirth; the speed with which different individuals react to these stimuli; the extent and kind of reaction we make to them, makes each individual in the world unique from every other individual. These individual differences in emotionality constitute a large part of what we call *personality*.

It is because of these individual differences that human behavior appears to be unpredictable and to follow no laws such as seem to operate in the physical world. It is also for this reason that the answers given by psychologists and others in the social sciences must at times seem vague and uncertain. "If I just pay no attention to Johnny when he sulks, will he come out of it sooner?" is a perfectly justifiable question and one that a psychologist might possibly be expected to answer. In reality, however, the psychologist would say in answer, "I cannot tell you without knowing why Johnny is sulking, with whom he sulks, how long this behavior has been going on, what methods have already been tried and with what results." In other words, one sulking child with a certain set of emotional patterns, physical constitution, and life experiences would react to the *neglect treatment* quite satisfactorily and be helped by it. Another child of different temperament and outlook would retreat more within himself and feel more and more rejected under the same treatment. For this reason, prescriptions and panaceas for human behavior are neither possible nor wise. Emotional differences are very evident from one child to another, even within one family. For example, Blatz and his associates (15) studied the social development of the Dionne quintuplets from the twelfth to the thirty-sixth month. They say: ". . . these five children already manifest quantitative and qualitative social and personality differences of a more or less stable nature."[1] The data include the number of social contacts directed *towards* each child by each of the other four; the number of contacts *initiated* by each child; the number of *responses* made by each child to every other child; the number of times each child *watched* each of the other four; and so on. The analysis of these and other data leads the authors to say:

> Thus, it is Annette's high frequency of initiated *to* contacts that undoubtedly attracts to herself the watching attention of the other four, which in turn must stimulate Annette to further aggressive social behavior in order to satisfy the developed need for an audience. . . . Annette and Marie have *fewer* contacts directed towards them than they direct towards others. Cecile and Yvonne have *more* directed towards them than they direct towards others, and Emilie is in the centre position. . . . Annette provides the most initiated *to* contacts and Marie the least.

What beautiful examples of individual differences in early childhood! With both heredity and environment so nearly identical for the five children, what a puzzle for the geneticists and environmentalists to solve!

Terminology

In the present chapter we shall review, in a cursory way, some of the experimental work on emotions. We shall not concern ourselves with the voluminous work on the emotions of *infants.* Those interested in these fields may consult the following references: 15, 41, 58, 59, 79, 93, 124. Questions of terminology, however, might as well be gotten out of the way immediately. Clear-cut distinctions between *feeling, emotion, mood,* and *temperament* are a little difficult to achieve. Warren (122) defines *feeling* as "an affective experience, especially of pleasantness or unpleasantness or as an emotional experience (with a qualifying adjective)." That is, one's feeling about a slimy object would be a *feeling of unpleasantness,* while his experience with fresh fruit would be a *feeling of pleasantness.* Or, we might speak of a *feeling of sad-*

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[1] This and the following quotations from *Collected Studies on the Dionne Quintuplets* (15) are reproduced by the courtesy of the author, Dr. Blatz, and the publishers, The University of Toronto Press.

ness, or a *depressed feeling,* or a *hurt feeling. Emotion,* according to Warren, is "an experience characterized by a strong degree of feeling and usually accompanied by motor expression, often quite intense." Anger, that is to say, is an *emotion* and contains a decided element of action and motor response. Fear and embarrassment likewise are emotions. They are stirred-up states within the body and have a large action-accompaniment. *Mood,* Warren says, is "an enduring but not permanent emotional attitude, and in this particular is distinguished from *temperament,* which is more permanent." A child who has had a violent temper outburst or a bad scare may have a hang-over for some hours after the original experience. This is a mood. A child, on the other hand, who *characteristically* gets upset and irritable with little provocation has an irascible *temperament. Temperamental,* to go one step further, describes the individual who alternates from one mood to another and from one degree of intensity of response to another.

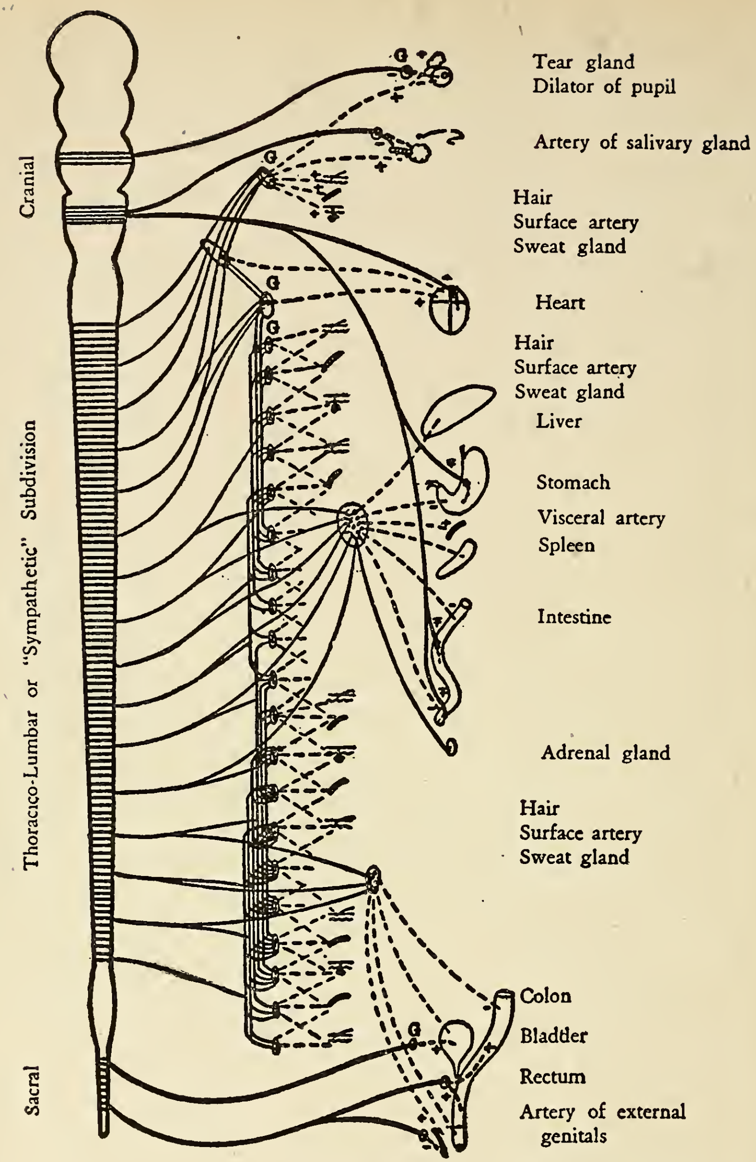
Psychological literature of the last few years has tended away from categorical names by which discrete emotions can be designated. The older practice of making lists of emotions inevitably resulted in quibbling as to whether emotions were simple or complex, whether they were inborn or learned, whether they were present at birth or matured as the nervous system developed. Further difficulties arose when attempts were made to classify emotions. Freud (37), for instance, feels that the primary emotions are those which derive from the "life instinct," including sex and self-preservative impulses, and those which derive from the "death instinct." Healy (46) feels that in explaining human personality we must accept the "four fundamental wishes formulated by Thomas" (120); namely, "the desire for security, based on fear; the desire for new experiences, based on craving for excitement; the desire for affectional response; the desire for recognition." To these, however, Healy would "emphatically add a fifth fundamental wish—the desire for *repetition* of the familiar." In a previous chapter (Chapter IV), we have already discussed Watson's claim that emotions of fear, rage, and love are the only ones that are *unlearned,* and that they appear innately from only a few restricted stimuli (124). This view is being seriously challenged today.

Without going into detail, we should at least mention the question of so-called *types.* The lay mind likes to think that mankind can be divided off into different innate or constitutional types. All members of a type are then supposed to be more or less alike and to be different from individuals of any other type. Furthermore, members of one type are usually considered to resemble each other in particulars other than the one upon which the type division is established. One hears much of types of temperament (sanguine, choleric, phlegmatic, melancholic); of nervous constitution (excited, inhibited, mixed); of body build (pyknic, dysplastic, athletic, and asthenic, the last two more recently being combined and called leptosome); of psychic energy (introvert and extravert). Some investigators have named *types* that included individuals who were supposed to be similar in body-build, temperament, *and* liability to disease, either physical or mental. The type theories, including others not mentioned here, divide individuals off into discrete categories, with gaps between the categories. These theories are sometimes spoken of as *multi-type* or *multi-modal theories.* The literature in this field is much too extensive to review at this point. We shall have to say arbitrarily, therefore, that the best-controlled experiments do not indicate any such sharp divisions. On the contrary, the evidence points rather to the *single-type* or *uni-modal* manner of distribution of characteristics. Experimentation proves that any human characteristic that can be measured will be found to exist in varying amounts from high to low, few individuals possessing extremely small or extremely large amounts of the characteristic and more and more individuals having amounts that approach the *average* or the *mode.* This distribution is the familiar *bell-shaped* or *normal distribution curve.* (Mathematicians are questioning the universality of the normal curve, but for our present discussion it is safe to employ the concept just as most texts on test construction do.) There are no gaps on the measuring rod; some individuals could be found who possess *any* amount of the characteristic that is being measured. Furthermore, a person may, and usually does, occupy one position on the scale when one trait is being measured and another position when another trait is being measured. Furthermore (in some instances pertaining to emotions, for example), an individual may occupy one position on the measuring scale at one time or under one set of conditions, and a different position at another time or under another set of conditions. Few people are entirely introvert or entirely extravert, entirely phlegmatic or entirely melancholic. If they become so, they usually need to be institutionalized. All this is not intended to imply that there may not be innate constitutional differences from one person to another, which will make for later emotional differences. Studies on infants, in fact, seem to indicate that there are emotional differences in infants at birth. By the time differing environmental circumstances have operated upon constitutional differences, the end products form a wide range of differences which make one individual almost totally unlike any other individual.

Autonomic Nervous System

We might at greater length discuss other of the technical and academic matters relative to emotions and emotional life (59, 87, 93). Our present purpose will best be served, however, if we omit hair-splitting distinctions. We shall attempt to get more nearly into the life of the child by arbitrarily saying that we shall include in our discussion of emotions all such words as excitement, distress, joy, delight, fear, anger, jealousy, aggression, hostility, affection, disgust, shame, guilt, elation, anxiety, apprehension, inferiority, and thrill.

We must be familiar with some matters of research, however, if we are to understand the child's emotions. One of these is the role of the nervous system in emotional life and the effect of emotions upon bodily health. For a more thorough understanding of these matters, the reader is referred to Cannon's classical study (21). In addition to the *central nervous system* (spinal cord, brain and its appendages) and the *peripheral nervous system* (afferent nerves leading to the central nervous system and efferent nerves leading from the central nervous system out to the muscles and glands), there is the *autonomic nervous system*. (See Figure 18.) The latter is an efferent system of nerves, ganglia, and plexus which innervates the smooth muscles of the internal organs and the glands of the body. As its name indicates, it is (largely) independent of the central nervous system. Since the autonomic system has so much to do with emotions, we must consider its three parts somewhat more in detail. The uppermost division is called the *cranial* division. It lies near the head and the upper part of the spinal cord. Its fibers reach out to the tear glands, pupils of the eyes, artery of the salivary gland, hair follicles, sweat glands, and visceral organs, including heart, stomach, and intestines. The lower division is called the *sacral* division because it emerges from the spinal cord in the region of the sacrum. Its fibers innervate the colon, bladder, rectum, and the artery of the external genitalia. It can be seen that by one or the other of these two divisions, the cranial or sacral, practically all the internal organs are reached, the cranial innervating those in the head and the upper parts of the trunk, and the sacral, those of the lower trunk. While the body is doing its ordinary work-a-day activities, each of these divisions is sending out impulses to its respective field. During mild emotional states, such as joy, pleasure, contentment, elation, or satisfaction, the cranial and sacral divisions are also


Cranial
Thoracico-Lumbar or "Sympathetic" Subdivision
Sacral
G
Tear gland
Dilator of pupil
Artery of salivary gland
Hair
Surface artery
Sweat gland
Heart
Hair
Surface artery
Sweat gland
Liver
Stomach
Visceral artery
Spleen
Intestine
Adrenal gland
Hair
Surface artery
Sweat gland
Colon
Bladder
Rectum
Artery of external genitals

From Cannon, Bodily Changes in Pain, Hunger and Rage.

Figure 18—Diagram of the More Important Distributions of the Autonomic Nervous System. The Preganglionic Fibers Are in Solid Lines; the Postganglionic in Dash-lines. The Nerves of the Cranial and Sacral Divisions Are Distinguished from Those of the Thoracico-lumbar or "Sympathetic" Division by Broader Lines. A + Mark Indicates an Augmenting Effect on the Activity of the Organ; a — Mark, a Depressive or Inhibitory Effect.

busily at work regulating normal heart action, respiration, salivation, digestion, and the like. Incidentally, it will be noted that the description of this activity sounds like a fairly adequate description of "good health" and a possible prescription for "long life." For these reasons, some have proposed that all the aforementioned upbuilding emotions be called *positive emotions.*

The middle division of the autonomic nervous system behaves quite differently. It is a very wide-spreading set of nerve fibers and ganglia leaving, and lying adjacent to, the thoracicolumbar region of the spinal cord. It is therefore known as the *thoracicolumbar division* of the autonomic nervous system, and also as the *sympathetic division.* Its numerous fibers extend to all the organs which (as we have already said) are also activated by either the cranial or the sacral division. The circumstances in which the thoracicolumbar division acts, however, are very different. Suppose, for example, that an individual were sitting at a flower-decked table chatting pleasantly with his family and enjoying good food and kindly social relationships. One need not be versed in psychology to envisage what takes place in the salivary glands, heart, lungs, and stomach under these circumstances. Suppose an emergency, such as a fire or an acute illness of one of the family group, arises. Roughly speaking, the cranial and sacral divisions slip out of gear. At least, for the most part, their control over the internal organs stops, and the work is largely taken over by the thoracicolumbar division. The effect of this interchange is to get the body ready for the "emergency." Speed, endurance, strength, and brute force are needed now. In consequence, the flow of saliva and the digestion of food may stop. The heart and lungs, on the other hand, increase their activity.

Cannon has further contended that the adrenal gland is stimulated into activity by the thoracicolumbar division (and only under these conditions of strong emotion) and then releases its store of adrenalin into the blood stream; this in turn, he says, causes the liver to pour out its store of glycogen or blood sugar. The blood sugar makes possible rapid combustion of food for muscle activity. Thus, the whole picture has changed from one of mild activity to one of great activity. All this expenditure of energy is brought about, of course, at the expense of great strain on muscles and vital organs. Furthermore, since there is such great catabolism going on, there is more strain thrown upon the organs of excretion. Cannon therefore speaks of the "emergency theory of emotions," meaning thereby that strong emotions and the thoracicolumbar division of the autonomic nervous system prepare the body for the strains and stresses that emergencies thrust upon us. It is easy to see why the effects of the emotion do not immediately disappear when the emergency has been faced and handled, for even the chemical composition of the blood is changed during violent emotion. The effects upon heart, stomach, and other organs may be felt for hours afterward. The picture of the activity of the sympathetic division is one of debilitation; hence some have called the emotions that accompany the emergencies of fear, panic, anger, hate, and the like, *negative emotions.*

The role of adrenalin (or epinephrine) in emotions or in pain has been challenged by Rogoff (98). He does not question the role of the sympathetic nervous system, but he claims that the results attributed by Cannon to adrenalin have been found "in animals that have been deprived of their adrenals or whose epinephrine secretion has been suppressed." Furthermore, Rogoff says that epinephrine is released from the adrenals under ordinary conditions constantly, and not just under emotional reactions, and that the conditions which under the "emergency theory" increase this flow "do not detectably modify this rate of secretion." Rogoff goes on to say that the autogenous continuance of adrenal secretion, which, according to Cannon, accounts for the persistence of the emotional state, cannot be demonstrated, but that, on the contrary, evidence has been obtained indicating that there is no such autogenous continuance.

The role of the nervous system in emotional life has not been challenged. The hypothalamus, which is a part of the interbrain, is now known to be the brain center for the autonomic system, although the cortex plays a part also, as witness the fact that *thinking about* an emotional stimulus may make one become emotionalized.

Although this account of the activities of the autonomic nervous system is only a shorthand description, so to speak, it nevertheless shows us that a child who is allowed to grow up having constant fits of anger and rage, or suffering debilitating fears all the time, will have his thoracicolumbar system "in gear" far too frequently. Such a child will suffer not only from the standpoint of social acceptance and mental hygiene, but also from the standpoint of physical health.

Conditioning of Emotions

In connection with a study of emotions, mention must be made of the process of *conditioning.* It will be recalled that Pavlov was able to cause the dog's mouth to water by ringing a bell (after the bell had previously been rung in connection with the presentation of food). Such connections or conditionings also take place in the human being.

Many of the likes and dislikes that children display, and even their fears, are built up in much the same way. The child under wholesome home conditions comes to associate fondness not only with the members of his family, but with their appearance and their behavior. For just such reasons, most of us still like food prepared in the way we learned to like it in our own homes as children. On the other hand, suppose a child is frightened by a stranger who happens to be carrying a black satchel. If the fright has been sufficiently intense, he may, for some time thereafter, be afraid not only of all strangers but of all black bags and satchels. Some children who have experienced pain or fright in an office after having ridden on an elevator come to fear all elevators. Similarly, a child may connect emotions with words. Many times in clinical practice, the writer has met parents who apologize for omitting the title "Doctor" in address. They often say, "My child has been frightened by doctors so often that I thought it was best in bringing him to you just to speak of going to see *Miss* . . ." Incidentally, modern pediatricians and children's dentists make it a serious part of their professional technique to avoid, insofar as possible, the building up of fears on the part of their patients.

The fact that one builds up new connections in his nervous system by *conditioning* (it now appears that the Russian word might better have been translated originally as "connecting") or by *connecting* either new stimuli to old responses or new responses to old stimuli is very apparent. Two points, however, must be mentioned in this connection. In the first place, there is ample experimental evidence that all human learning cannot be explained by conditioning, and that there are gaps and discrepancies between animal conditioning and human conditioning at certain points. In the second place, from the practical point of view as regards emotions, a caution must be introduced. One often reads case histories of individuals whose whole emotional life was colored, or conditioned, by one strong emotional experience. The existence of such cases cannot be denied. However, it must be remembered that human personality *normally* has a kind of integrity that gives it a great amount of resistance. The normal child is perhaps not likely to be thrown into a lifetime phobia of dogs through one frightening experience with a dog. By the same token, a child, as a rule, does not become afraid of a parent who punishes him severely once. Whenever we see a child with abnormal fears or other emotions, it is probably because of *multiple causation*. For example, the child who is not loved is likely to be more fearful and therefore to respond more violently to a fear stimulus. The child who is hungry becomes the more easily angry. The child who is tired is more emotional generally. The extreme life-long emotional behavior found in an individual who had one "conditioning experience" is probably an evidence of a nervous system that was highly unstable and overreactive to begin with.

Psychogalvanic Reflex

A challenging laboratory study of emotions has to do with the *galvanic skin reflex.* This reflex, or perhaps more correctly "response," is the resistance of the skin under varying kinds of stimulation. It is recorded and measured by electric currents. The electric response of the skin is an indication of the activity of internal organs or viscera. Jones (57, 58) has experimented with the galvanic skin reflexes of infants. He was interested in determining thus the relationship between the infant's outward behavior (crying, for example) and his internal or visceral behavior during emotion. Interestingly enough, Jones found that, in general, there was an inverse relation between the amount of visceral reaction and the amount of outward activity. This would seem to mean that the more the infant cried, the less disturbance went on in his visceral organs, and, conversely, that the more crying was repressed, the greater was the visceral activity. This is a finding of such significance that it is curious that more research has not been done in the field. Light might thus be thrown on the age-old question as to whether giving expression to our emotions increases or decreases them. Just when and to what extent should we attempt to stop crying in children? How and when should we try to prevent fighting in anger? Should we encourage children not to "cry it out" or "fight it out" or even, for that matter, "swear it out"? G. Stanley Hall used to say that undoubtedly swearing had saved many a man's soul, meaning thereby that swearing was probably less dangerous or offensive than some of the things man might do (or think) if he were obliged to restrain all unsocial behavior. The question is of extreme importance. On the one hand, we know that "crying it out," if encouraged, may become a habit and may become stronger through repetition. Indeed, crying, hysterical personalities are no doubt produced, or at least fostered, by just such programs. On the other hand, how about those individuals in whom feelings have been bottled up for a considerable time with no outward expression? Matters get worse as their feelings become cumulative. Giving vent to the feelings in such cases does seem to clear the atmosphere and to diminish the feeling and emotion. Suppose a child is frightened on a dark night. Does he become more or less frightened by running?

The reader who had the good fortune to see a war film called *Journey for Margaret* (based upon actual records of English children removed from their homes and evacuated to rural districts for protection against air raids) will remember the peculiar behavior of the child who thought she must not cry. When she was given assurance that it would be all right to cry, and to cry as hard as she wished, her behavior began to be much more normal. Some psychiatrists responsible for the care of psychoneurotic soldiers are now raising the question as to whether the early training of these soldiers may have stressed too severely the inhibition of emotion and the desirability of "acting like a little man."

The question as to what happens to our emotions when we give expression to them is complicated in the extreme. There is one school of thought which believes that problem children should be allowed to express their emotions in order to get rid of them. This is much like the old theory of *catharsis.* The child, for example, who feels aggression or hostility must, according to this belief, be allowed to "work out" his aggression, thereby getting rid of it. Much current psychotherapy works along these lines. The child who wants to break windows or destroy furniture is allowed to do so without restraint and without being made to feel guilty. This technique has had beneficial results with many children.

Now the question arises as to *why* such handling of children has therapeutic values, when it does, and whether it always would. There seems to be no scientific justification for believing that aggression or hostility or any other emotion exists as an entity having measurable amounts; nor can we scientifically believe that the expression of such emotions drains off or uses up any of such amount, thereby leaving less to trouble the individual later. In the second place, we cannot overlook one of the accepted laws of learning, to the effect that *one* of the factors by which a reaction is strengthened is by *making the reaction;* the oftener, the stronger. What reason is there, therefore, for thinking that the child will stop doing the thing he is allowed to do? This policy would seem to run counter to all that we know about learning and habit formation. The answer probably lies, not in "getting rid of" the feelings, but rather in what satisfaction (or annoyance) the child gets out of the activity. If hitting or breaking or striking gets him attention, victory, feelings of superiority, or the like, he will in all probability continue the performance and *strengthen* the aggressive habit instead of getting rid of it. If, on the other hand, his undesirable behavior attracts no attention, brings him no prestige, does not get him into the limelight, or brings him a feeling of futility or pain, he will in all probability desist—not because he has gotten rid of his hostility, but because he decides that such behavior gets him nothing. This is called in psychological language "the law of effect," in other words, behavior that brings one satisfaction is likely to be repeated, and behavior that has either no results or annoying results will not be repeated.

It would appear that there is no one answer to the question as to whether giving expression to the emotions increases or decreases their intensity at the moment. The answer is probably "yes" under some circumstances and "no" under others. Perhaps the following criteria may help in formulating an answer. Let us look first at those cases where it appears that giving expression to the emotion diminishes the emotion at that time. Every social worker and counselor has had clients come for consultation so overcome with grief that choking back a betrayal of emotion was very difficult. It may have been so difficult that the sufferer's whole *attention* had to be devoted to speaking at only those times when he could trust his voice. Sometimes under such circumstances, we may have suggested that perhaps it would be easier for the client if he were to make no effort to control his feelings for a while since it "must be very difficult to talk without crying." Such reassurance that his behavior is not considered childish may release the flood gates. Thereafter, the client's attention is given freely to the interview and is not distracted by trying to choke back tears. In all such cases, where giving vent to expression thereby *releases the attention to the problem* rather than confining it to the voice, the mouth, or the eyes, certainly composure is more quickly reached and the emotion itself is more quickly dissipated. Perhaps there are other emotional episodes where giving expression to the feelings provides a new point of attack, facilitates solution of the problem, and eventually lessens the emotion. When this is true, there is certainly no harm in giving expression to the emotions.

Let us look at the converse of the picture. There are probably circumstances in which giving overt expression to the emotion may be bad for social or psychological reasons, regardless of whether it increases or decreases the amount of the emotion itself. The blind fury with which some children fight when angry may illustrate the point. The exchange of blows may not even bring a solution to the problem that originally set off the anger. Nothing happens except that blows are exchanged and hurts are inflicted. The attention is not confined to restraint, as in the previous example, but is rather diffused and concentrated on nothing, perhaps not even on the skill required to end the fight. Usually in such cases the emotion is strengthened. The behavior is blind, and the results may be also. Psychologically, then, the emotion may be intensified. From the social point of view, one always wants to raise the question as to whether giving expression to the stronger and particularly the negative emotions may not interfere with the formation of higher and more socially acceptable habits of response. If a child were always allowed to fight when angry, he would certainly be delayed in learning the techniques of argument, debate, and finally of consultation and conference.

To avoid misunderstanding at this point, let us notice that growth in matters of emotional control in no wise means the *suppression* of all emotion. The kind of emotional control that makes for ultimate mental hygiene necessitates *expression* as well as *suppression.* In the matter of laughter, for example, we desire, not that children refrain from laughing, but that they laugh about the right situations at appropriate times. Likewise, many a child would have developed into a more emotionally balanced adult if he had been encouraged to express affection. Education is not complete until a child is taught both to acknowledge his mistakes and to express his gratitude. Joy, thankfulness, love, and humor should be stimulated through appropriate expression.

Children's Wishes

In connection with the situations that put emotional coloring into the lives of children, consideration should be given to an investigation by Jersild, Markey, and Jersild (56). Four hundred children, including 25 boys and 25 girls at each age level from 5 through 12 years, were interviewed. One of the questions asked of the children was: "If you had a wish and your wish could come true, what would you wish?" "If you had another wish?" "If you had another wish?" Almost fifty per cent of the replies indicated a wish for some specific material object or possession. This type of wish was more common among younger children, among boys, and among less intelligent children. Interestingly enough, the wishes for specific material objects and possessions occurred almost twice as frequently among the children from public schools as among the children from private schools.

Do we sufficiently realize how great may be the desire for some particular object, especially among poorer children whose possessions are not too numerous anyway? It would appear that herein lies a factor of great importance in explaining the behavior of some children. The appeal of some material object—a ring maybe, a bicycle, or a knife—may furnish such a driving impulse that theft results. Most adults can remember, no doubt, a youthful desire for some coveted possession, so strong as to interfere with sleep. Some of us can remember carrying a treasured object to bed with us and putting it under our pillow. It was so precious we wanted it with us all the time. Perhaps, if we had been among the younger or among the less intelligent, our desire, if ungratified, might have led *us* into delinquency. A good deal of our virtue may not have required much moral fiber. It may be accounted for perhaps by the fact that our parents appreciated our longings and attempted to satisfy them whenever possible.

In the group of children referred to, the other wishes (something over fifty per cent) were distributed among wishes having to do with family relationships (have a baby, have a sibling, retain parents, be married, have friends, make visits, and so forth), personal self-aggrandizement, general benefits for society, amusements, and specific benefits for parents.

The trends shown by the answer to Jersild, Markey, and Jersild's (56) question "What would you do if you had a million dollars?" are much the same as those just enumerated. It should be noted, however, that by far the most common answer to this question was "bank it," "spend it," or "keep it"—seeming to show no particular plan for the immediate spending of the money. A large percentage of the children also indicated that they would use their million dollars for a charity or benevolence of some kind. In conversation later, however, the hypothetical amount was reduced to 25 cents; then ". . . . it did not seem to occur to children who had made eloquent provisions for the poor when possessed of a mythical million dollars that they might begin work on a small scale with a small sum."

Although asking a child about what he wishes for is not a particularly subtle technique, nevertheless it does sometimes reveal desires of great intensity about which we should know if we are trying to help the child. Pressey and Robinson (89) tell of an adolescent Negro girl who expressed as her strongest wishes a "gold front tooth and a sweater."

Children's Fears

Fear is such a paralyzing experience that it seems strange we know so little about methods of preventing it. The life of most readers of this book is beset at some point or other by fears that produce discomfort, inefficiency, and perhaps at times even illogical behavior. Many intelligent adults do not realize the devastating effects that fear produces in their own lives. This is largely true perhaps because they do not understand that many, if not most, of our fears are not fears of objects but fears of social situations, of human relationships, and of our own weaknesses, real or imagined.

A few years ago, in a graduate class in psychology, the writer asked each student to think of some prominent person whom he greatly admired—the President, a great scientist, a writer, or an actor, for example. The students were then asked to tell what they would do and how they would feel if they were told that on the same day they were to be given an opportunity to meet and visit with the celebrity. Various emotions were registered on the faces of the students at this request. The first one called upon looked somewhat embarrassed and finally said falteringly: "Oh, I think I should actually run away. Of course, I never could talk to *him!* I should be so frightened I would not have a thing to say—not even about the weather." The second student called upon said: "I should *enjoy* such an opportunity immensely. There are so many things that I would like to ask him and talk with him about." The remainder of this group of adults divided about equally on these two positions: about half were eager and willing to meet another human being in spite of his prominence; the other half were *afraid* to do so. If we include such social fears as these, the list of things of which human beings—adults and children—are *afraid* would be much longer than any such list that has ever been published. If by study we can learn anything about how to prevent such paralyzing experiences as the one just cited, a consideration of the fears of children is certainly appropriate (108).

In passing, it must be noted, however, that a *little* fear is not an altogether unpleasant experience for a child. In small enough amounts, fear is an essential element of "thrill" and affords a part of the enjoyment of climbing, walking on stilts, swinging, riding on a roller coaster, watching wild west pictures, or reading mystery stories. Beyond that critical point, however, fear becomes paralyzing in its effects.

In the work of Jersild just referred to (56), the same children were asked about the things of which they were afraid. The outstanding feature of the results was the "apparently irrational character of children's fears." More than one-fifth of the first-named fears of these five-through-twelve-year-old children were fears of the occult, the supernatural, mystery, skeletons, corpses, and death. When checked against the children's own reports of "the worst thing that ever happened to you," no connection was found between things the children feared and the things they had real occasion to fear. Fears of animals and of the dark also loomed large in the children's reports of their fears.

These verbalized fears of children are certainly important. On the other hand, equally important, if not more so, are the fears that children carry around but are either unwilling or unable to verbalize. The fear of punishment, of the death of parents, of being different from other people, of being inferior to other children in sports or in school, the fears induced by competition, or even the fear of blushing, may be devastating to a child without any adult's ever really knowing that the child is having the experience. Many an interesting tale can be told of such individual fears that dominated the life of an individual child but that never came to light until years later. A child known to the writer grew up under fairly comfortable economic circumstances. However, at about age eight, she heard the expression "sold out by the sheriff" applied to friends of the family. When she asked the meaning of the words, it was explained to her. From that moment, for a period of several years, she never heard "hard times" or "difficulty of collecting bills" discussed without imagining that her own family was in imminent danger of being "sold out by the sheriff." She would actually hurry home from school to see whether the household goods might be sitting on the curbstone ready to be carted away. Now, her parents could have given the child a reasonable degree of assurance that such a calamity was not likely to overtake the family *had they known* that she was harboring such a fear. She, however, supposing that the parents were as fearful as she was about the family's economic security, thought there was no use worrying everyone by talking about it. It is difficult to imagine the variety of ways in which this child's conduct was modified during this time by the pall that was hanging over her. It is likewise impossible to know the extent to which her ideas of money and of economic security may have been more or less permanently influenced. It hurts to picture the agony through which many children have lived in recent times where the danger of being evicted was not only a possibility but an actuality!

How much more intelligently we could help a child with difficulties of school adjustment if we knew that the reason the child was not getting along was that he was *afraid* of some of the speed drills so common nowadays in number work and reading (55). Much has been written on the value of competition as a spur to effort. Only half of that story is usually told, however. A large number of children, far from being motivated to greater productivity by competition, are on the contrary thereby made to shrink up within themselves and to lose what skills they do possess. How often a child in school may fail to give the answer that he really does know because he is *afraid* that it will be wrong, or that he will blush while he is reciting, or that someone will laugh at him! Failure and a black mark are infinitely to be preferred to such agony!

So much of children's conduct would be explicable if we were only more adroit in reading their minds (which, by the way, they are likely to think we *can* do). A small girl in a minor illness one time annoyed everyone who was attempting to care for her by her constant activity in bed. She would not lie still; she kept moving her feet continually. Her behavior was so exaggerated that no one knew what to do about the situation. Finally, it became known that at one time the child had asked an aunt how one knows when a person is really dead. Facetiously the aunt had replied, "Oh, when they stop wiggling." The child, being literal-minded, as children are likely to be, had concluded then that the way to keep from dying was to make sure that she continued "to wiggle," and this she faithfully tried to do!

Fear is instilled into children probably more often than we realize by their religious training. Of course, this danger depends greatly upon the type of religious training that the child receives. Certainly the thought of a personal devil, a hell in which one may burn for sins that he *unwittingly* has committed, a God who has an all-seeing eye particularly intent on seeing misdeeds, or the likelihood of sudden death without repentance, may be very terrifying to a child.

There is very little in the literature on children's ideas of death (8, 24, 102). The fear of death, unlike some fears, is not one that can be prevented by our preventing a child's contact with it. Sooner or later, a child meets death situations, whether it be the death of a pet, a grandparent, a playmate, or a member of his immediate family. Perhaps we can spare the child the experience of seeing highly emotionalized adults at funerals, or of witnessing interments at a cemetery, or of looking upon dead bodies that are prepared for burial. However, we cannot protect a child from the *fact* of death. For that reason, the death of a bird or an animal along the roadside may be an easy approach to a subject that must inevitably arise. One of the difficulties that parents experience in helping children to meet death situations is that the parents do not know what they themselves really believe about death and the hereafter. One hesitates to reassure a child on these matters, if he does not feel confident himself. Many parents, however, do not hesitate, regardless of their other beliefs, to assure a child that the deceased person is not suffering and will not suffer. We can also stress the undyingness of memories and of influence. The once rather common fear among children of being buried alive can, with reasonable assurance, be dismissed nowadays by a slight reference to improved medical attention and, if necessary, a reference to improved embalming methods.

Some parents ask for help on the question of their children's fear of kidnaping. Unfortunately, this fear is not so groundless as some children's fears. It is rather in a class with the fear of being run over or the fear of becoming ill. For all such possibilities, we must try as best we can to help the child to develop intelligent *caution* without the terrors of fear. In regard to kidnaping, for example, there are certain simple precautions in which we can unemotionally instruct our children—never to go along with a stranger without the knowledge of parents; never to accept gifts from strangers; always to be able to give one's own name, address, and telephone number; always to ask for information or help from policemen or uniformed officials. All of this must be done with a minimum of emotion, however, and with a care lest we develop fear of all strangers and a loss of confidence in human beings generally.

In an earlier chapter we spoke of the theory of the "birth trauma." Physical damage, of course, often results from prolonged or difficult delivery. Some psychiatrists feel that there is also *psychic* birth trauma that occurs in some infants. The question seems to be: "Do individuals suffer emotionally later because of the vicissitudes of birth?" In addition to the discussion of previous pages, we might add here one bit of experimental data on this point. In Holmes' study of the fears of young children (53), a comparison was made of the fears of preschool children who had had difficult births and those of children who were not reported to have had difficult births. So far as susceptibility to fear was concerned, no difference was found between the two groups. Evidence of disturbed emotionality produced by *psychic* birth trauma seems to be lacking.

All who have had wide experience with children have encountered some children who, in spite of our best efforts, go from one fear to another. A case comes to mind of a child seen by the writer a few years ago. The mother reported a sequence of fears that had terrorized the child almost to the point of panic and mania. First he had been afraid of bells and would cover his ears, hide, or even run away from home when nearby church bells or school bells rang. After a time, without anyone's knowing how or why, this fear passed away. It was succeeded by a fear of becoming bald. Where this fear originated the mother was unable to tell. It so gripped the child that he would painfully and tearfully ask his mother if he would "*ever* go bald." After reasoned explanations and attempts at unemotional handling, the mother felt herself driven finally to assure the child that he would *never become bald*. One can imagine the feelings of an intelligent mother who felt herself being forced into giving such an unwarranted assurance. This fear also passed away, only to be succeeded by a fear of appendicitis. The origin of this fear was obvious enough, since the father had been taken ill in the night and had been removed to the hospital for an operation. The extent and depth of the fear, however, was so all-absorbing as to be pathological in the extreme. In all probability, most of this child's fears did not so much represent fear of the avowed cause as they did a generally unstable nervous and emotional condition within the child. Evidence of this is that some of the child's delights were just as abnormal in intensity and scope as his fears. At one time, for example, he became interested in streets and street names. Not only did he talk about streets and street names to the point of annoying those around him, but he also inflicted great physical strain and hardship upon himself by walking miles without food through remote and unknown parts of the city, looking for new street names. What essential insecurity prompts his manias, no amount of examination has as yet revealed. The point is that, although in such cases we should, of course, strive to remove fears as they arise, we must not be surprised if our task has to be repeated for a continuous succession of fears. Although we are studying the child to discover the source of his essential lack of emotional security, we should in the meantime strive to give him as much emotional security in his home relationships and in his own evaluation of himself and his abilities as we can.

We shall pass with a word the question of *phobias*. They are relatively uncommon in childhood. A phobia is an exaggerated and unusually pathological fear and dread of some specific object or situation, such as animals, high places, enclosed places, and so forth. An ordinary and decreasing fear of animals is not, of course, a phobia. When, however, the fear of dogs is so intense that one's life activities have to be planned so as to avoid all contacts with dogs, and when an encounter with a dog produces nervousness almost to the point of illness, we are justified in speaking of a phobia. The origin of the phobia is usually obscure, and the sufferer will probably require psychiatric treatment if he is to be helped.

We shall now discuss the prevention and cure of fears in children (49, 53, 54, 55, 68). Much more on the side of prevention *can* be done than usually *is* done. Many parents do not understand that the logic of a child's fear and the reality of it are two different things. The fear may be groundless from an adult point of view, but remain a devastating reality to the child, nevertheless. Laughing at a child's fear would be helpful only to the occasional child with a stoicism that may ultimately be more of a detriment than an asset. Most children get over fears more quickly and develop a more wholesome attitude toward life if their fears are given considerate recognition by adults. Since *suddenness* and *unexpectedness* seem to be potent fear-producing situations, a little cleverness on the part of adults will help much in preparing a child for the unusual. Sometimes a preliminary explanation or a little preliminary practice, together with a word of reassurance, will go far toward preventing the building up of a fear in the first place. Imitation of the behavior of a reasonably assured and composed adult in whom the child has confidence is also a powerful help in establishing poise in the child. In general, it may be said that if we can build up in a child good health, increasing skills, emotional security, free access to a parent or parent substitute with whom he can talk and in whom he feels confidence, we have done the major part of the task of preventing disabling fears. There may still arise an occasional fear in such a child, but, after all, a child who is safeguarded in this way can come through an occasional fear without suffering too greatly thereby. Furthermore, as soon as a child learns that it is possible to receive help in handling his fears, he has a powerful weapon of self-protection. Such a child has less occasion to fear *fear*. He can look back upon previous fears as "water gone under the bridge," so to speak. The unfortunate child, however, whose fears have been ridiculed or who may even have been punished for his fears, meets each new fear-provoking situation beaten before he starts.

So much for prevention. Suppose, however, prevention has been neglected, as is the case with so many children with whom social workers and psychologists have to deal. Suppose the fear is already there (54). We shall speak a little later of devices for finding hidden or unverbalized fears. But how about the fears that are evident? The question is sometimes raised as to whether we should allow a child to talk about a fear or a fearful experience. The answer to that question is certainly an affirmative to the point that the child learns he *can* discuss his troubles with an understanding adult; to the point that he feels he has a resource to which he can turn when he needs help; and to the point that by allowing him to talk we may, at certain places, be able to introduce a little explanation that may correct misunderstandings on his part. Let him talk about it? Not to the point that he loves to talk about it in order to appear different from other people, or in order to secure attention.

A willingness to *admit* a fear is a good way of making it one's *own* problem with which one must deal mostly himself. Children become rather adept sometimes in devising methods of helping themselves overcome their fears. A child, for example, once said to his mother, "I believe if I could have a cord on my electric light so I could lie in bed and turn on the light myself for just a minute when I get scared, it would help me get over this silliness."

In the case of both social and physical fears, we shall be of aid to the child if we can help him develop specific skills in the fields of his weakness. A mother helped her adolescent son who became increasingly fearful as the day for his first dance approached. Many an adult can personalize this agony! What did they talk about at dances? What did they do after each dance was over, and so on, and so on? (One can picture the mother-son relationship when the boy was able to ask these questions of his mother.) The mother realized that the attitudes and enjoyments or fears resulting from this first big social affair would go far toward determining the boy's social skills and social adjustments for the rest of his life. She realized that she must help him develop his own skills. She also realized that self-consciousness must not be allowed to wreck the scene. She suggested to him that the thing for him to do was to keep on his mind all the time during the eventful evening whether *Margaret* was comfortable and whether *Margaret* was having a good time. Now, obviously, this is not a specific that would work with all boys, or that all boys would need. It worked in this case, however, for the mother knew her boy, knew his feelings toward Margaret, and understood all the other subtleties that would enter into the situation. The point is that the boy went to the dance fairly confident that he knew what to do, with something to think about other than himself, and bounding youth took care of the rest.

A little help in developing physical skills in skating or dancing or playing games will help to make physical fears disappear. A little help in building up skill at some of the hard points on long division, or fractions, or reading will be of inestimable value in preventing academic fears. Fortunately, particularly with younger children, nature helps too, inasmuch as some fears seem to disappear more or less of themselves, especially as the child learns more skills in various fields.

In addition, we must not lose sight of the fact that learning in the field of emotions and emotional control conforms to the same laws of learning that apply to arithmetic or spelling. Fears tend at least to fade, if not to disappear entirely, through *disuse* just as the multiplication tables get weak if the child does not practice them. There is much to be said, therefore, for not exposing a child to dogs while he is in an acute stage of fear of dogs. *Knowledge of one's own success,* we are told in the psychology of school subjects, is a great incentive to learning, and it is probably no more true in any field than in the field of learning emotional control. If the child is helped a little at first in meeting his fear situations, he can take courage from his success and will feel motivated to go on trying.

Negative adaptation, or becoming *used to* a situation, may be used in building up emotional control, but *with care.* For one thing, there is no point in trying to build up negative adaptation to *all* fear-producing situations. We are not interested in getting a child negatively adapted to being teased about freckles by a thoughtless adult, for example. We should rather *prevent* such situations. However, those situations which are inevitable, such as thunderstorms, must be rid of their terror for the child if he is going to live comfortably. They must be accepted and must be gotten used to. Negative adaptation, of course, requires repetition of the situation. It can perhaps be tried with safety in cases where the fear is not too intense, where each repetition clearly demonstrates the uselessness of the fear, and where each repetition can be accompanied by more reassurance and security (the law of effect). To attempt negative adaptation by throwing a child already fearful of the water into the water is certainly not to be countenanced. Neither would it be wise to force a child who is afraid of the dark to go into the cellar alone. These methods would fail to bring about negative adaptation. They would, instead, intensify the fear, and at the same time would break the thread of reassuring contact with the adult who ought to appear in the role of helper.

Just a word may be said about breaking down fears through a process of conditioning—better *reconditioning*—after the fear has already been conditioned into the child. If the fear-producing situation can be changed in such a way that the child associates it with *satisfaction rather than with fear,* we have accomplished a desirable reconditioning. One mother changed fear of lightning into enjoyment for her small son. When a storm came, the mother would take the boy on her lap. (This in itself made *all* things seem more nearly right.) Then she encouraged her son to count aloud with her to see how far they could count between a peal of thunder and a flash of lightning. It is difficult to ascribe proper amounts of the therapeutic value of this procedure to the composure of the mother, to her willingness to help the child, to her presence, to his having something to do (counting), to his observation that nothing much really happened because of the lightning, to increasing maturity, or to a number of other possible contributing factors.

Another mother helped her daughter overcome a fear of the dark by a process of conditioning. The child would complain of the dark after being put to bed. The mother said: "Yes, I know it is dark and black. I like it though. The dark is *soft*. It is like black velvet." She then brought out her black velvet evening dress which the child always loved to see her wear. Together they would sit for a few minutes in the dark while the child ran her fingers over the soft black dress. A few such reassuring experiences entirely changed the little girl's feeling about the dark.

Anger in Children

We shall not discuss at length the question of anger in children. Reference should be made to Florence Goodenough's study (41) for a detailed account of anger. In passing, however, we should note that, although all anger is not necessarily evil, *too much* of it has a depleting effect upon the individual physically, and an ostracizing effect upon him socially. The fine point would seem to be to learn the things about which we should feel angry and to learn constructive ways of using anger. Individual differences in the ease of arousal and intensity of anger are very great. The writer remembers her own surprise when she discovered that "seeing red" was not a figure of speech but was, for some persons, an actuality. If we do not experience the sensation ourselves, it is difficult for us to understand it in others.

As was emphasized in the discussion of fear, the strongest bulwarks in handling anger also are good health, emotional security and reassurance, prevention, and self skills. The angry child is a struggling child, a child struggling with a problem. There is something he cannot do or something in which he is being thwarted. A child who characteristically is angry and petulant is either a sick child or a child who is being constantly hampered, interfered with, or thwarted.

With little children, the hampering often arises out of their own physical ineptitudes. In this connection it is interesting to notice that the quarrels of children in anger during the first four or five years of life are almost entirely physical and non-verbal in nature. A child has matured considerably when he begins to quarrel by the use of language rather than by the use of legs, arms, or teeth. Adults can help by discovering what a child's particular "sore spots" are, and by protecting these from injury so far as possible. Most of us are thoughtless about embarrassing children by dragging out the skeleton from the child's emotional closet. "My, how you are growing!" may seem harmless to us, but may be so hurtful to the child with the long arms and legs that he could happily slay the thoughtless person who has so little regard for his feelings.

Anxiety, Guilt, and Jealousy

Anxiety, conflict, and *guilt* (68, 94) are negative emotions that not only make a child uncomfortable but also hinder his building up self-confidence in meeting the world. They are somewhat hard to classify and seem to partake largely of some of the other emotions we have discussed. *Jealousy* (105) likewise is devastating in the extreme. It is possibly a combination of fear, anger, and a feeling of incompetence. The jealous child is likely to be emotional in many other respects also. Much of what has been said about prevention and treatment of other emotions applies here with equal force. Jealousy has so many devious and indirect ways of manifesting itself that it is not always recognized for what it really is.

Anxiety has much resemblance to fear, but it is not likely to be attached to particular objects or situations, as is fear. Nothing perhaps is more debilitating to an individual's well being than feelings of anxiety. The specific handling of anxieties is too involved to consider here, except to say that, in general, the best antidote is the development of feelings of security in affectional relations, of skills, and of feelings of self-confidence.

Guilt is a negative feeling that modern religion and modern psychology do not strive to cultivate, as was formerly done. A child may be literally weighed down with a sense of guilt. Guilt, as such, may be altogether paralyzing. Confession of his behavior often helps. We want a child, of course, to develop discrimination about his own conduct and to be dissatisfied with conduct that does not meet his own requirements. When he does fail in this particular, however, we wish him to be sorry but to have the confidence and the ability to be able to do better the next time.

Evidences of Other Emotions

Although there seems to be justification for some discussion of fear, anger, jealousy, and other specific emotions, it must not be forgotten that there are many evidences of emotional disturbance to which we cannot assign a particular name (14). Take the matter of nail-biting, for example. Nail-biting is an evidence of emotional disturbance. Viets (121) has shown that the nail-biting children whom she studied tended to come from homes where there was emotional instability, drunkenness, overprotection, jealousy, or other devastating factors. The nail-biting child, as a rule, presents a different picture from the thumb-sucking child. The latter is likely to be more placid; the former, more restless and active. This is scarcely the place to discuss the psychoanalytic theories (125) of the origin of such oral habits as nail-biting or thumb-sucking. The point is that treatment should begin with and should proceed from health and emotional security as points of reference before we think about any external methods of restraint. The psychology of encouragement helps after the child has actually made the problem his own and is trying to help himself. A manicure set has helped many a child who is trying to break the habit of nail-biting.

The "Nervous" Child

The *nervous* child (20, 60, 61, 64, 82) is a kind of *John Doe* besieged by any one of a number of emotional disturbances. The category includes children whose nervous activity originates in such diverse factors as fatigue; health factors such as diseased tonsils, eye strain, carious teeth, heart trouble, chorea, and other diseases; embarrassment; emotional burdens; or perhaps even actual psychoses. The treatment for the *nervous* child obviously depends upon the etiology of his nervousness. For this reason it might be better if we gave up the use of the term. If its use is justified at all, it might be for the occasional child who comes from a stock whose nervous systems are highly irritable, a child who tends to over-react to all stimulation.

Unfortunately, there are some children whose nervousness is so extreme that the outlook is quite bad. In other words, there are some children who are actually psychotic, or at any rate prepsychotic. Such children require the care of specialists in nervous and mental disease.

The teacher, nurse, or social worker who meets children with extremely bizarre behavior or marked retreat from reality will, of course, refer such children to a child guidance center, a psychiatrist, or a psychologist who has had experience in this field. Such cases illustrate one of the instances of the necessity for knowing when a problem is beyond our ability to solve and when it thereby becomes the problem of a specially trained person. Professional literature, however, may be helpful, and for those interested, the following references are suggested: 22, 60, 61, 62, 63, 64, 72, 75, 86, 101.

Suicide in Children

An extreme of emotional imbalance is represented by the suicide or would-be suicide. Several studies of suicidal children have been published. There is a question whether some of the children who have killed themselves have actually been suicidal in intent, if by suicide we mean deliberate or intentional self-destruction. A two-year-old child who fell out of a second-story window and was killed has been described as a "suicide." The case resulted in death, but was it intentional self-destruction? A thorough understanding of the mental processes of a two-year-old would not permit our ascribing an adequate knowledge of the dangers of height or, for that matter, of death to a two-year-old mind. Those who have occasion to pursue the subject of juvenile suicide further will find help in the following references: 9, 127, 134.

Emotional Tests

Within recent years there has been much research in the matter of *emotional tests* (23, 27, 88, 92, 96, 97, 108, 119). The line between *personality tests, tests of emotionality,* and so-called *psychoneurotic inventories* is not clearly defined. Ascendance and submission, introversion and extraversion, suggestibility, annoyance, and persistence have all been investigated by the use of adjustment score cards, developmental age tests, interest and attitude tests, behavior rating schedules, and numerous other devices. Many of these tests are "paper-and-pencil" tests. Some are so planned that they may be used either with an individual child or with a group of children. Often there is a series of questions that the child is asked to answer. The answers are then scored and checked against supposedly *normal* or *typical* answers. Obviously, the larger the number of *atypical answers* the child gives, the more he is unlike, in these particulars, the children upon whom the test was standardized originally. This technique presupposes, of course, that the child understands the meaning of the questions, is in rapport with the examiner, and answers the questions as truthfully as he is able to do. There has been much misunderstanding about the use and interpretation of the results of such emotional tests. Obviously, the score that a child makes on such a test is not in any sense comparable to an intelligence quotient. It is not a fixed entity. The fact is that the better the test, the more the child's performance on it will differ from one time to another, since his actual emotionality will vary from one time to another. Furthermore, the size of the child's score may actually not be so important as the *types* of questions to which he gives atypical answers. For example, suppose a child did not make a large number of atypical answers but those that he did make all indicated fears about his body, or his health, or his physical prowess. Obviously here is an *area* in which the child needs help. The test would seem to justify itself in such a case, regardless of the validity or reliability of the total score. The clinical psychologist is likely to feel that such tests display their greatest value as *interview aids* rather than as testing or measuring devices. Very frequently the chief usefulness of such tests comes from some one particular question or group of questions that reveal a field of emotional difficulty. The way may thus be opened for therapeusis, the need for which would not otherwise have been apparent. However, it must be understood that none of these devices is diagnostic all of the time.

Other Diagnostic Aids

There are several methods that can be used by experts for unveiling and curing emotional difficulties in children. We shall mention these techniques, not because the readers of this book should use them, but rather that they may be familiar with newer movements in therapeutic work with children. So-called *play analysis* (13, 29, 37, 39, 48, 66, 74, 109, to cite only a few references) is a psychiatric technique in which the child comes to the psychiatrist at regular times; is allowed to choose his own play materials; and, within reasonable limits, to do as he wishes with them. The nature of his play and his comments as he plays are all carefully noted. It is often found that the hostilities and fears which a child experiences in real life he acts out also in play, even though he may not have been able to verbalize them. This method would appear to have in it much of value, with one proviso. As the analysis continues, the psychiatrist sometimes puts in a word of interpretation to the child as to *why* he is playing as he is. Obviously, this interpretation depends upon the psychiatrist's own particular "school" of psychiatry. Here would seem to be the critical point. Knowing as we do the high degree of suggestibility in children, it is easy to see that an interpretation might, by dint of sufficient repetition, be accepted by the child, verbally at least, even though it had not originally been an actuality.

It is scarcely possible yet to evaluate the cures claimed by the play analysts. Play analysis usually requires many hours of play interview extending over a long period of time. How much improvement might have come about, because of other factors, in the same length of time, it is usually impossible to say.

As a matter of fact, teachers and parents have for years been observing children's play and learning much about children's feelings and emotions thereby. The *group worker,* trained in modern schools of social work, learns the value of interpreting the behavior of individuals as they participate in group activities. Social workers and clinicians can probably go much further than they have gone in providing somewhat controlled play situations in which to observe child behavior.

Dolls which may represent different members of the child's family or others with whom he has frequent contacts, automobiles, paints, blocks, pictures, scissors, sand, plasticine, and many other objects can easily be kept in one's office. The child's reactions to these objects, even without psychiatric interpretation, may be very illuminating. His conversation as he plays, the toys which he prefers and those which he avoids will likely reveal to us more than he realizes himself. It would appear that interpretation to the child of what *we* think he is feeling as he plays is not necessary for either diagnosis or for therapeusis. Diagnostic play activities will probably be used more by social workers and other clinicians as time goes on.

Drawing, art work, construction with plastic materials, and finger painting may give children an excellent opportunity to work out their aggressions harmlessly. Much that would otherwise be inexplicable in their behavior is sometimes thus revealed (1, 10, 17, 29, 71, 103). At Bellevue Hospital in New York City, interesting work has been done in the children's ward by the use of puppets (11). The puppet plays are so written as to illustrate common emotional situations in which children find themselves. It is much easier for the child to see the right and the wrong of a situation when the actor is a puppet, rather than himself. The children in the audience often call out vigorously to the puppet characters, telling them what to do and what not to do. Much conversation goes on between the children and the puppeteer. Discussion in the ward follows: the children evaluate the characters, change the plays, write new ones, or help make the puppets. The impersonality of the whole situation makes it easier for the child to face the situations with which he himself may be struggling. Valuable therapeutic results are being accomplished.

Of course, the "own story" and other personal documents method of getting a child's account of his feelings and actions is one commonly used in clinics and courts. References 29 and 104 might be read in this connection. The analysis of children's dreams (65) is another device used by some clinicians.

The so-called "association test" aims to reveal the connection of ideas that the child has in his mind. He is given a stimulus word and is asked to respond with the first word that comes to his mind. Unusual associations may indicate unusual experiences that the child has had. If the stimulus word were "afraid," for example, and the child should immediately reply "thunderstorm," there could be little doubt as to what he was thinking. Kent and Rosanoff (99) have a list of a hundred stimulus words to each of which the subject is asked to respond with the first word that comes to his mind. Emotional reactions are indicated when the response is very slow in coming, when it is unusually fast in coming, when no response whatever is given, when the stimulus word is repeated, or when strange and apparently irrelevant responses are given. An adaptation of the Kent-Rosanoff norms for children has been arranged by Woodrow and Lowell (130) and many other applications to work with children have been made (100).

Projective Techniques

In 1939, Frank wrote a paper that he called "Projective Methods for the Study of Personality" (36). Frank stressed the point that much of our study of personality had hitherto been made by the use of media that were highly suggestive of the impact of culture and that what we must have was culture-free media into which the individual being studied could "project" his own personal modes of reaction. Some such projective techniques had, as a matter of fact, been used before that time, but they had never been so designated. In 1945, Sargent (100) reviewed the literature on projective techniques for the study of emotionality and personality. Her review cites 274 references. Obviously, the field is quite too extensive, controversial, and technical to be critically evaluated in such a text as this. Only fairly brief reference can be made to some of the methodologies. It should be borne in mind that some of the projective techniques are both diagnostic and therapeutic (36, 100, 116). The references already mentioned will give some familiarity with various play techniques, the mosaic tests, picture tests, psychodrama, art techniques, drama and puppets, the world test, frustration tests, and others.

Among picture tests perhaps the best known and best standardized is the Thematic Apperception test (80, 81). The Szondi test is also a picture test for eliciting personal projective reactions developed at the Menninger Clinic.

The Rorschach Ink-Blot test is one of the oldest and best means of getting under the surface and into the real personality make-up (6, 7, 45, 67). Standardized ink-blots are printed on cards and the subject is asked to tell what they look like and what he sees in them. Great differences are found in the reactions of highly emotionalized, apathetic, deranged, and normal individuals. The administration and scoring of the test require a great amount of technical training. The literature on the Rorschach test is voluminous, Sargent (100) citing 41 references in her review alone.

The tautophone, or verbal summator, is a device in the auditory field for doing essentially what the ink-blot and picture tests do in the visual field. Low vowel sounds are produced on a machine and resemble speech without being speech. The subject is asked to tell what the voice is saying, and he is left free to inject his own meanings and thoughts into the sounds.

Another device much used at present is moving pictures of children in certain situations in which they presumably are acting emotionally. Some of these films show children doing finger painting, reacting to supposed frustration, or acting aggressively with balloons. There may be danger, at this point, that we fall into an error that earlier psychologists made. The moving picture of a child in a situation where an adult has presented certain stimuli which the adult imagines will call forth certain emotional responses is no guarantee whatever that the child actually *feels* those emotions (35, 113).

We have been discussing highly technical methods that can be used best by professionally trained specialists to discover deep-lying emotions in children. Does that mean, then, that the social worker, the teacher, the nurse, the school counselor, or the visiting teacher can never hope to discover any of the matters that may be troubling a child? Fortunately, there are methods that can be used which may be very revealing. Common sense would dictate that one of the first things to do in trying to understand a child is to *watch* him and to *allow him to talk*. Even these two apparently simple techniques require more real understanding of child psychology and more finesse than is apparent on the surface. Observation and listening by a skillful child worker will often give real information. Much of what children *write* either spontaneously or on assigned topics reveals a great deal of their own feelings (69, 123). There are also *questions* that have been used skillfully by many workers. One hesitates to print a list of such questions lest someone get the idea that all one has to do is to take a pencil and paper and proceed to corral the child, make a frontal attack, and, like a talking machine, "ask the questions." Obviously, there are times when some of the questions are not appropriate at all. In any case, they are probably more effective when used conversationally and maybe not all at the same interview. Sometimes a few questions will give us enough material with which to work for some time. Sometimes we may suspect that the child is not ready to talk about certain things and that therefore we had better omit certain questions entirely for the time being. Perhaps the safest precautions for all who deal with human emotions are *good sense* and *empathy,* or the ability to feel oneself into another person's situation. These two criteria would seem to make the following imperative:

(1) Don't forget that the child may be decidedly uncomfortable. Make the situation as easy for him as possible.
(2) Be kindly, but objective—not effusive.
(3) Don't talk too much yourself. Get the child to talk.
(4) Don't "talk down" to the child.
(5) Don't ask questions until rapport has been established.
(6) Don't try to get too much the first time.
(7) Don't follow any outline or interviewing device woodenly.
(8) Don't take notes obviously.
(9) Don't show shock at anything the child tells you.
(10) Don't try to handle problems that require expert handling in a particular field.
(11) Don't betray confidences except where by doing so you may actually be giving help or protection.

Emotional Maturity

We hear much nowadays about *emotional maturity* (87). Emotional maturity would seem to be a desideratum that is more easily discussed than defined. Those of us who are directly or indirectly responsible for the eventual attainment of emotional maturity in children should give serious thought to the matter. Although our ideas of emotional maturity will differ as our philosophies of life differ, perhaps there are *some* points that we might agree have been achieved by the individual who has emotional maturity: (1) the maximum self-honesty in regard to one's own emotions; (2) growth, with age, in a selection of the things that arouse one's emotions; (3) constructive and productive behavior in emotional situations or crises; (4) such control that the balance between positive and negative emotions and feelings is in favor of the former, even in spite of environment; (5) an understanding of, and respect for, the emotions of others.

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CHAPTER XI

THE SEX LIFE OF THE CHILD

Introduction

The following is a verbatim copy of a letter received by the author from a mother whom she had never seen. Because it contains the kind of question so often asked of professional workers it is reproduced here.

May 15, 1938

Dear Doctor:

Will you please advise me something of the psychology of a six-year-old girl as to personal reaction to sex mischief. Should they naturally have a distaste for such mischief?

I learned that my daughter was the aggressor in such a case and it was a little more than curiosity. She knew it was wrong because she lied about it at first but after questioning her she finally admitted it and said she heard some big boys talk about it in the school yard where she had gone to play last summer.

I have been trying to understand it by thinking of my own childhood. I never heard anything like that at that age and do not know what my reaction would have been, but I know in late childhood I heard something and was thoroughly disgusted without anyone telling me that it was wrong. It was always sickening and distasteful and I'm wondering if a child is born with good taste and good qualities or do they develop as they grow up? I think if I understood more about this I would know better how to handle the situation. Will I never be able to trust her? Will I always have to watch her and lecture about such things, or will I just let her forget it and trust that she will develop a personal distaste for such actions? Do you think she would forget it, or will it leave a scar?

She's going to school now and I get very good reports from her teacher. She says she's very interested and attentive and is doing very well in her studies.

She mixes well with the children, both boys and girls. Her home life is happy. We are all happy and contented. She is in excellent health, has a very nice disposition and I never worried much about her conduct as there didn't seem to be anything wrong. She obeyed little things like stealing and lying that I had taught her were wrong.

I have heard mothers say to their children, "Nobody will play with you if you do this or nobody will like you if you do this or that," but that was never my idea. I never wanted her to be self-conscious or sensitive and, too, they will learn later that there are people who are not good and yet are very popular. Although I think it's nice to be respected, I do not believe in being good because of what people will think of you.

Her father is an ideal character and I know positively that he was a good clean boy. We have good families and that's why I can't understand her. I might add that it was a younger cousin whom she tried this mischief on and, fortunately, his mother is the only one who knows it and she's very broadminded.

We live in a nice neighborhood; the people are in ordinary circumstances but in general a nice class of people. This may not seem like a problem to you but it worries me, not knowing if it was normal or abnormal and wondering how it will affect her later.

I don't know for sure if it was my place to write to you about it, and if it was not will you please advise me where I can get enlightenment on the subject. I shall appreciate it greatly and thank you for your patience.

Sincerely

(Mrs.) W. R. G.

A letter such as the above, from a conscientious and intelligent mother, illustrates the necessity of a discussion of children's sex life. The letter also illustrates a great number of very significant subtleties, some of which we shall not go into. The obvious points of the letter would seem to be the earnestess of the mother and her desire for help. Furthermore, there is a willingness on her part to admit a fault in her child and to bring it out in the open, even to the point of revealing it to a perfect stranger. In the third place, she senses that perhaps her daughter's behavior is not so abnormal as she sometimes thinks it is. In the fourth place, the mother, trying to be frank and at the same time sympathetic, is looking back into her own childhood and that of her husband for a possible explanation of the child's behavior. We can overlook, for the time being, that her memory of her own childhood experiences and her knowledge of her husband's may be quite inadequate or even inaccurate (18, 37, 46, 54, 60). We can also temporarily overlook the fact that, even if the conditions about the parents' early behavior were exactly as stated, the child of the present generation may be constituted quite differently and may be subjected to a very different environment. In the fifth place, the fact is that, no matter how well-trained we may be theoretically, precocious sex behavior in *our* children is a very different thing from such behavior as described in a textbook. It is easy to be calm and philosophical about sex behavior in the abstract, or in someone else's child! In the sixth place, the mother's real attitude about sex behavior in children (and in adults) is revealed by such expressions as: "distaste for such mischief"; "knew it was wrong because she lied about it"; "finally admitted it"; "thoroughly disgusted without anyone telling me it was wrong"; "was always sickening and distasteful"; *"will I never be able to trust her?";* "will I always have to watch her and lecture about such things?"; "will it leave a scar?"

Inadequate as a reply by letter is in such instances, the following answer was sent. Since it represents some of the essential ideas which it is hoped this chapter may contain, it is reproduced below:

My dear Mrs. W. R. G.:

May I reply to the last part of your letter first? I think you are to be congratulated upon your six-year-old. A child who does as well in school, at home, and with other children as she apparently is doing is indeed a blessing to any mother. The child is particularly fortunate, too, in having a contented and happy home life and, as I believe, intelligent parents. Won't you just look at this picture yourself for a minute and see that you have right here in the items I have just mentioned the real stuff out of which a fine woman is made.

Now, as to the other matter about which you write, I may say that I think you are unduly disturbed about the matter. Of course, I understand that you are concerned about the necessity of handling the situation correctly. I can assure you, however, that what your little girl has done is nothing more than what thousands of children have done before her. I think I disagree with you about its not being motivated by curiosity. I think curiosity was undoubtedly the root of the activity. I believe any child who has done something through curiosity and then senses parental disapproval might be tempted to lie out of the matter.

There is no doubt but that attitudes toward sex have to be learned and built up in children just as surely as the alphabet, the multiplication table, or the Ten Commandments have to be learned. Our great-grandparents did have the idea that children were born knowing what is right and what is wrong in regard to sex, but we have long ago given up that notion. We realize now that nice ways of doing things, fine ideals, and high standards of living are not born in people but that they are *learned*. Please rid your mind as soon as possible of the fear that you will never be able to trust your little girl again. I know of nothing that would drive her to undesirable conduct sooner than sensing that her very own mother did not trust her.

I should so much prefer talking this matter over with you rather than having to write to you about it, but, may I suggest, until such a time as we may have a chance to visit, that you do a little reading in the following places. I should suggest that you send to the Children's Bureau, U. S. Department of Labor, for a little ten-cent publication called "Child Management." There are several very interesting things in this pamphlet, including a short discussion of sex instruction for children. If you can get to a library where there is a copy of a book called "Everyday Problems of the Everyday Child," by

Thom, you will find a helpful chapter on Sex Behavior in it. Also, in another book called "Just Normal Children," by Florence Mateer, you may find Chapter 22 helpful. There are a number of other references that I might be able to suggest which I do not have time to hunt up just now. The Government also puts out some very helpful pamphlets for the use of parents of older children. Someday, if you care for them, I can give you the list of these also.

The reading helps given above are rather incomplete, but I was so anxious to get this letter off to you that I am not waiting to hunt up more references at this time. I want to assure you again that your little girl is probably perfectly normal and simply needs sympathetic understanding and help in her growing-up process..

If I can be of any further assistance to you in the future, I shall be glad to do so.

Very truly yours,

Parental Attitudes

In various chapters of this book, the role of parental attitudes is stressed. The matter is nowhere more important than in regard to sex. The sex experiences in one's own childhood, the kind of, or absence of, definite sex instruction, as well as the marriage relationship itself, all color a parent's attitudes and procedures in training his or her children. In discussing this matter with graduate students, the writer often makes an assignment something like this: "If you were responsible for the rearing of a child, what goals or ends would you hope to have achieved in the matter of sex by the time the child reaches maturity?" A clear statement of such attitudes, ideals, habits, and practices requires very clear thinking.

Contributions of Psychoanalysis

Many of the implications of sex *per se* we shall not undertake to discuss. However, social workers, particularly, must be familiar with some of the concepts that are current in professional literature. As everyone knows, the school of psychoanalysis has emphasized the role that sex plays in the life of every individual. The psychoanalysts give their own definition of sex. According to this definition, the term is much broader and is more inclusive than in ordinary usage. At this point confusion arises. In reading analytical literature, the average person is likely to interpret "sex" in the more common and restricted meaning of the term, and, for this reason, much misunderstanding results. However that may be, the psychoanalysts have contributed materially to the understanding of human nature. They have helped to bring a powerful phenomenon of human nature into the realm of decency and discussion; they have shown that sex instincts operate in childhood much earlier than was formerly supposed; they have illustrated the underlying motive of sex in certain behaviors which, on the surface, do not appear to be sexual in nature; and they have demonstrated the connection between sex and certain baffling and bizarre behavior disorders such as workers with children frequently encounter.

Freudian psychoanalysis says that in psychosexual development of children there are three periods (42). The first of these is the *infancy period.* Such activities as self-fondling, thumb-sucking, sucking objects, biting, kissing, tickling, and general motor restlessness are interpreted by Freud as being sexual in origin. In the earliest life of the child, according to Freud, libidinal satisfaction begins with the mouth. This is the "oral stage." Sucking and swallowing have their accompanying *ego attitude* of "incorporating." Later, biting and devouring are accompanied by "destroying and annihilating." The oral stage is followed, according to Freud, by the "anal stage." The activities of *expelling* and *retaining* by the anus have their ego attitudes in "rejecting and destroying" and "controlling and possessing," respectively. Also, in infancy there is an "early genital period" in which sex activity is likely to include handling, touching, rubbing, and exhibiting genital organs, accompanied by "tender affection." Much of the infancy period is conceived to be autoerotic and narcissistic in nature, except in the later part when the child's affections begin to include his parents.

Following the infancy period, Freud finds in children the "latency period." During this time the cruder infantile manifestations of sex and sex conduct drop out or partially drop out of the behavior of the child. Their force is still felt, however, in new interests and activities. "Repression" and "sublimation" also begin to emerge. In the beginning of the period attachments are bisexual; that is, the child displays fondness for members of both sexes. Homosexual attraction, however, manifests itself before the period is over and extends into early adolescence.

The "adolescent" or "pubertal period" from about 12 to 18 years includes the "late genital period" with a revival of localized genital sensitivity. Homosexual attachments are made during this time. Finally heterosexual attraction and adjustments are achieved.

Author's Point of View

This is not the place to go into details of the Freudian or other psychoanalytic viewpoints. Neither is it appropriate here to compare or criticize them. It is perhaps necessary, however, in view of these omissions, to state one's own viewpoint. The position adopted in the author's clinical work and throughout the present text is as follows. *First,* sex is a factor in the life of every normal human being. When properly developed and intelligently handled, it is highly constructive and is a source of happiness. *Second,* it is undoubtedly true that in much human behavior there are *masked* sex drives. They may be so disguised that the uninformed do not recognize them for what they really are. *Third,* there would seem to be no biological reason for supposing that sex, or any other instinct, is operative in every act or series of acts which an individual performs. *Fourth,* many complex behaviors have interlocking circles of various urges, drives, and impulses. Because sex may be *one* factor in a very complex whole, it does not follow that it is either the only factor or the dominating factor. There are many situations in which sympathy, need for security, desire for adventure, or any one of a number of other drives is infinitely stronger than sex *per se. Fifth,* the excitability, strength, and persistence of sex impulses differ enormously from one individual to another, just as other biological traits and functions do. *Sixth,* because of the strength of human sex drives and because of anomalies of development and distortions in training, sex may, in pathological cases, become involved in many abnormalities of behavior. *Seventh,* not only must we be careful not to generalize from a few cases, but we must be particularly careful not to generalize for the mass of normal human beings from data secured from obviously abnormal or pathological cases. Because some feeble-minded or neurotic children, wrongly trained, display a great interest in fecal matter, play with it, or put it into their mouths, it does not follow that all children do likewise. Because some girl children, by reason of circumstances peculiar to their up-bringing and locale, wish they were boys and express a regret that their external genitalia are not like those of boys, it does not follow that all girls or women go through a phase of development dominated by a "penis envy" or a "castration complex." *Eighth,* it is a truism of both phylogenetic and ontogenetic development that the more complex the trait or function, the further removed from physiological necessity for individual survival, the more functional rather than structural, and the more the admixture of intellectual elements, the greater do individuals differ among themselves in regard to that trait or function. Sex development and sex behavior, then, can be expected to show considerable variation from one individual to another. Even in relatively simple, physical performances such as locomotion, children differ in the age at which they reach certain stages. They also differ somewhat in the length of time in which they linger in various stages such as creeping, standing alone, and walking with help before walking alone. Indeed, occasionally some child even omits one of these steps entirely. Learning to talk is less physiological and more intellectual. In learning to talk, children therefore differ very much more than they do in learning to walk. In such a matter as sex behavior then, it seems quite unscientific to postulate that there are certain definite stages through which every normal child must pass at approximately a given age. *Ninth,* one of the demands of scientific reasoning is that we be on our guard against reasoning by analogy. Figures of speech, too, are likely to be dangerous in scientific thinking. Psychoanalysis often falls into this error. A study of sex requires that we avoid mere *verbal analogies*. *Tenth,* finally in all attempts to understand human behavior it seems like good judgment to adopt the simplest explanation which recognizes all known data. There is sometimes a temptation to look for a subtle or hidden meaning or explanation and to overlook entirely the practical common-sense one.

Mistakes in Adult Thinking

A high school teacher, once a student of the writer, tells of an experience in his boyhood which he thinks has made him a better teacher. He recalls that, when he was in the ninth grade, he and some friends decided to "razz" another boy. Finally, after teasing the boy in less drastic ways, they took off his trousers and hung them up on a very high hook in the cloakroom where the boy could not get them. All the boys who were apprehended in the mischief were expelled from school. The narrator of the story tells of the side glances he got as he walked along the street, of the subdued tones in which his parents discussed the whole affair at home, of the evident seriousness of the school directors when they called the culprits to a meeting to consider reinstatement. He says that his confusion and bewilderment about this adult behavior were profound. It was not until years later that it dawned on him that the adults in the community thought the prank originated in *sex* because they had taken off the boy's *trousers*. He remembers now that at the time of the affair the trousers might just as well have been shoes, shirt, or necktie so far as thoughts of sex were concerned. Very often adults make such a to-do about a bit of behavior which may have sex implications to *them*, but which may be absolutely devoid of any such implications so far as the child is concerned.

A social worker from a children's institution came to the writer once, saying that boys in the neighborhood had been standing under the windows of the girls' dormitory, talking to the girls. The police had picked up as many of the boys as they could find, had taken them into the office of the superintendent of the institution, and altogether there was great "fuss and feathers" about the matter. Now, for various and numerous reasons it may be well for institution matrons, whether in orphanages or private schools, to keep boys away from girls' bedroom windows. It is another matter, however, to handle the matter as though sex at its worst were at the root of the whole thing. Balconies with Romeos and Juliets haven't always led to seduction, abduction, or elopement.

Another curious quirk in adult thinking about sex has to do with "sublimation" and "sex energy." On the one hand, there are those who speak as though "sex energy" were something that could be diverted hither or yon. Some agencies, institutions, and clubs have acted on the principle of giving everyone so many other things to do that sex was "sublimated" into more socially acceptable modes of behavior. Some have thought, likewise, that by keeping adolescents physically busy and getting them physically tired sex urges would thereby disappear. On the other hand, there are those who would say that sex is *sui generis,* that nothing takes its place, and that nature allows no substitutes. The truth probably lies somewhere between these two positions. On the one hand, it is certainly true that if an adolescent chances upon some obscene pictures or pornographic literature, he may get his mind filled with stimulating visual images. If then he is unoccupied and has nothing to think about except these images, he is very likely to act upon them. With something more active and more attractive to do, he will have less time to call up the images to his mind. A boy or girl who has lots of recreational skills has less unoccupied time. All very well and good. Such programs should be encouraged, since they undoubtedly have salutary effects as regards sex behavior. On the other hand, the problem is not so simple that all we have to do is to keep adolescent boys and girls in a whirl and rush of activities in order to forestall sex activity. There will be times and places in the lives of normal vigorous youth in which nothing is a satisfactory substitute for the companionship of the opposite sex and for a certain amount of sex stimulation. Recognition of this fact is essential.

Sex Education

This book is intended for social workers, nurses, visiting teachers, and others who frequently have to deal with delinquencies, anomalies, and perversions in sex behavior. There is danger, therefore, that our further discussion may give the impression that we have a distorted viewpoint in regard to sex. To prevent such an erroneous impression, let us consider first the more normal and more usual matters of sex training for children. Sex education, owing largely, no doubt, to the help given by psychoanalysis, has had a great deal of attention within recent years. Reference to 4, 9, 10, 14, 17, 20, 22, 23, 29, 30, 31, 38, 39, 40, 65, 83, 84, and 88 will give *some* idea of the writings in the field.

Needless to say, mistakes have been made in the attempt to educate children in sex, just as there have been mistakes in every other field of teaching. Sex education has been, in some instances, undertaken by those incompetent to do the task. In some such cases, the very motivation to teach sex may have been an unwholesome and morbid desire to talk about sex matters. Sex education has been conceived by some to be a program against venereal disease. Such a concept is far from the whole truth. Some have thought that merely by giving a child *information,* we could thereby control his *emotions* and his *habits.* Some have thought that sex instruction should be given at certain specified times and in courses solely for the purpose. Some have thought that it could be handled in the same way that we have mistakenly tried to teach spelling and arithmetic *en masse.* Some have thought that all sex instruction should be given by the home; some, by the school or other public agency. All these ideas represent the growing pains with which the new discipline has had to struggle.

Best thinking today is rather different. Wile (83, 88), for example, calls our attention to the fact that in the expression *sex education* by far the more important word is *education.* Sex education without hygiene, biology, physiology, psychology, sociology, and ethics is inconceivable. Factual information, important though it be, is only a part of the study. "Less than one hundred pages would contain information enough to carry most people from infancy to and through marriage and parenthood," says de Schweinitz (24). In addition to *facts,* the child must be given *interpretation* of the facts, *idealism,* and *exemplary adult behavior* which he can imitate.

Much as we might wish it were otherwise, the fact remains that teaching sex is *not* like teaching ordinary school subject matter. For one thing, as Jersild says (47):

> It is difficult to make the child's sex discipline a functional part of his activity. . . . Most of his sex instruction consists of somewhat academic precepts and interdictions. He must accept on faith, so to speak, warnings designed to forestall activities which he does not fully understand.

Moreover, in sex education we are *not* trying to build up a desire to try out for one's self as we do in teaching reading, for example. Furthermore, it is very difficult to be as objective in presenting facts to a child in this field as in other fields. This is particularly true when a child's questions begin to go beyond the facts which, in our judgment, he is ready to understand or which we clearly perceive ourselves.

As for the role of the school in sex education, several things may be said (4, 11, 14, 29, 38, 51, 54, 62, 63, 83). Mention has already been made of some of the scientific subject matter which the school can provide, in a straightforward, unembarrassed way at the hands of the right teachers. Furthermore—and this is important—the school should be prepared to meet emergencies that sometimes arise in regard to sex. If sex behavior occurs in school, then school is probably the place where it should be handled, provided the teachers and staff are adequately trained to do so. The point is that real learning in matters of sex should take place when the motivation and activity are in operation. This is better than surreptitiously whispering about the matter, referring the matter home to parents, taking it up with the Parent-Teacher Association, or, worst of all, with a local women's club. Handling such emergencies in school presupposes, of course, that in the future teachers must have sufficient training in sex hygiene and mental hygiene, and must be sufficiently balanced emotionally themselves, that they can seize the golden opportunity to give instruction when the occasion arises.

It would seem very questionable indeed whether the schools should offer courses or lectures on sex hygiene as such. One of the greatest difficulties about such a procedure is that a group of students come to such a course, as a rule, with varying degrees of information already attained, with varying amounts of experience, and with varying philosophies and examples from home. For this reason, it is almost impossible to make a course or even a lecture equally appropriate for all students. The sophisticated child may go away amused. The ignorant child may be thrown into a bog of bewilderment. The highly emotional child may be keenly and unwholesomely stimulated.

It would appear that under normal conditions the burden of sex instruction belongs in the home. Unfortunately, not all homes are equipped to give it. A social worker, doctor, teacher, or nurse may have to give individual instruction to the child from such a home. The role of the home would seem to include answering children's questions in a straightforward and unemotional fashion. Furthermore, it may include anticipating children's questions. It is sometimes erroneous to assume that because the child is not asking questions about where babies come from and the like, he is not yet interested in such things. It may be he is just not interested in asking *us* because someone else has already told him—in some fashion which may not be to our liking. Such references as many of those listed at the end of this chapter are particularly good in helping parents and others to know how to answer children's questions. The ability to explain by use of scientific terms and names keeps our conversation from sounding vulgar. A scientific vocabulary is of great help in this particular (35).

The references mentioned above (particularly 75) are also helpful to the home in suggesting methods and devices for meeting many of the other practical questions of sex behavior. The use of foul language, undressing each other, "playing father and mother," and other kinds of sex play all require adroitness in handling. Many parents are glad of the help on these matters afforded by books such as those named.

The peculiar social, and indirectly sexual, problems of adolescence will not be taken up in this book on child psychology. However, it is in place to recommend such books as 10, 11, 20, 23, 30, 44, 54, 82, and some of the government pamphlets.

Problems in the Home

In addition to this type of help for the home, mention should be made of one or two other matters in regard to the best sex training. The emotional security about which we have had so much to say would indicate that a child needs outward manifestation of affection. Affection, however, is like some other blessings in that it can be carried too far. Too much and too constant display of affection, particularly if accompanied by fondling and kissing, may cause harm to the child. Some children, as they grow older, may be sexually stimulated in this way. Other children may come to enjoy the affection of their parents so much that they fail to broaden their interests and friendships, and thus may be hampered in the development of a final heterosexual adjustment with a mate in marriage.

Sleeping arrangements in the home likewise sometimes present handicaps in sex development. In addition to obvious reasons of health, it is wise, where possible at all, to have each child sleep in his own bed alone, preferably in a room of his own. While we must not expect that every time two children sleep together, "mischief" and sex play follow, yet it is true that it sometimes does. In the homes of clients, however, desirable sleeping arrangements are likely to be impossible desiderata. Sending the child to bed for punishment when he is not sleepy may also furnish opportunity for unwholesome manipulation of sex organs. If necessity forces two children to sleep together, a certain amount of supervision is desirable.

Privacy in the Home

Most thoughtful homes have at some time or other questioned the wisdom of their toilet, bathroom, and dressing procedures. Should there be free and unembarrassed sharing of the bathroom? Should members of opposite sex within the home undress in the presence of each other? Do such arrangements furnish wholesome opportunities for children to learn sex differences in anatomy which they must learn sooner or later anyway, or should there be the same reserve in the home that society expects elsewhere? There probably is no one right answer to these questions. Public opinion and custom are changing somewhat; witness the fact that some swimming pools for boys and some for girls no longer require bathing suits. It is certainly true that for young brothers and sisters the home probably affords the safest place for learning anatomical differences between the sexes. For *some* children, however, there comes an age when even the relationships within the home do not prevent actual sexual stimulation from one's own brothers or sisters or, for that matter, from one's own parents. It is impossible to lay down any rule on this point. Perhaps it is sufficient to call attention to the fact that during adolescence there is danger to some, and beyond that point to let rules be made for individual homes. One thing must not be overlooked—namely, the child's own feelings. If or when a child comes to a time when he prefers privacy, certainly he is entitled to it. Trying to force a child to break down some inhibition (even though it looks like a temporary whim) is as much a disregard of his rights as to make him listen to a radio program in which he is not interested. Some parents do not seem to realize that their adolescent sons and daughters are normally more self-conscious than a few years previously when they were children.

Members of homes where extreme care is exercised on all matters are usually surprised to know the extent to which children in less fortunately endowed homes witness sex relations between their parents. In certain classes of society, such experiences are all too common. The effects upon individual children are varied—morbid curiosity, anxiety, excessive or premature stimulation, or sometimes relatively little or no effect.

Masturbation

A common problem of sex development encountered not only by those working with problem children but by parents of average children as well is masturbation, or "self-abuse," or "onanism." According to Kanner (50), there are four types of masturbation: automasturbation, which is usually manual; mutual masturbation between two or more children who stimulate each other; instrumental masturbation by the use of various instruments, chair backs, and the like; and mental masturbation brought about through mental imagery.

In this connection, it is essential to note that much that is considered masturbation by disturbed adults is not really so. The matter rests partly upon definition and partly upon knowledge of facts. To the Freudians, thumb-sucking, ear-pulling, interest in defecation and urination are "larvated masturbation." To most parents, the infant's handling of his genital organs is also masturbation. More technical literature, however, would reserve the term for those cases of genital stimulation which is followed by pleasurable and voluptuous feeling or orgasm. Obviously, the practice of the infant may be mildly pleasant or hedonic, but is certainly not voluptuous and should not be called masturbatory. However, it is obviously the part of wisdom to broaden the infant's possibility for pleasure so that it does not continue within the area of his genital organs or, for that matter, within any part of his own body.

A second erroneous notion is that every time a child puts his hands on or near his genital organs he is masturbating. Teachers sometimes fail to distinguish between scratching made necessary by local irritation and masturbation. A child, particularly a boy, may keep his hands in his pockets to fondle a treasured knife or other possession or, for that matter, even to hold buttonless trousers in place. This may be misunderstood by the teacher who is on the lookout for trouble. Obviously, it is wise not to permit too much "hands in pockets" if thereby opportunity is afforded for genital stimulation. Common sense and a sane perspective on questions of sex are of inestimable value in such matters.

A few years ago a teacher-student of the writer asked if she might present a question which the third-grade teacher in her school had raised. The school in question was in a residential district where social standards are high but practical and there is commonsense withal. The third-grade teacher would like "the psychologist" to tell her what she should do, since "three-fourths of the third graders were openly masturbating in school"! Obviously this roundabout second-hand question was difficult to deal with. Suffice it to say here that open masturbation in school, while it may and does occur at times, is relatively rare. The writer taught public school for a number of years and never encountered it. Furthermore, among normal children open masturbation is not common, nor, for that matter, is mass masturbation. The items of the teacher's story simply do not fit the facts as regards children's sex behavior in school. Her misunderstandings were, it is to be feared, rather serious. Mass masturbation in school has been described (72). Such accounts, however, are very questionable.

While definite age limits cannot be placed for various sex functions, certain progressions are known to exist. Anyone who has had charge of babies knows, for example, that very young infant boys may have penis erection. This *may* be accompanied by mild feelings of satisfaction, although obviously this is difficult to determine, since the child cannot tell us about his feelings. The fact is that erection even to the point of sexual intercourse may occur before puberty. According to Moll (59), there may be ejaculation before procreation is possible. Moll further says, "The earliest authenticated age at which spermatozoa have been known to appear is 13½ years." Authorities do not agree, however, as to the age at which spermatozoa first appear.

One can scarcely speak of the "old" ideas regarding masturbation for, in spite of scientific evidence to the contrary, many adults still believe that the practice has devastating results, both physical and mental. Through unwise attempts at training, adults hand such beliefs on to children. Feeble-mindedness, insanity, impotency, hypochondriasis, depression, epilepsy, schizophrenia, and hysteria have all been assumed to result from masturbation. So far as youth is concerned, these dreads may be aggravated by the suspicion that one can tell by looking at a person whether or not he masturbates. Pimples and dark circles under the eyes, if they appear in a misinformed adolescent, may cause torment not only in and of themselves but because the unfortunate boy or girl thinks that thereby the whole world will know his *awful secret.* So much fear about the results of masturbation has been thrown into some growing children that boys have even been known to padlock their hands together at night lest they manipulate their genitalia in their sleep!

The writer is inclined to the opinion that the supposed deleterious physical effects of masturbation are still more generally believed than many people realize. Let us therefore look at the facts that scientific study seems to have established. Are there any dangers inherent in masturbation? Yes, there are. Obviously in the instrumental masturbation referred to above there is danger of physical harm to the genital organs themselves. The frequency of this, however, is probably relatively small. Secondly, there may be danger if masturbation is carried to extremes. This dictum, however, is also true of exercise, eating, drinking water, cigarette-smoking, and many other activities which in and of themselves are not harmful. The fact that automasturbation requires only the presence of one's self makes it possible that the act may be performed more frequently than if situations involving other individuals had to be provided. As to just exactly what the effects of excessive masturbation are, the current literature is still not clear. Local irritation, of course, may result, but otherwise the specific results are not enumerated. A third possible danger inherent in masturbation is that if it persists in childhood, in spite of wise efforts at control, it is likely to be associated with other evidences of bad mental hygiene. Withdrawing and introverted children tend to keep their thoughts and feelings to themselves and to find their solaces within themselves. The aggrieved child or the anxious child or fearful child may resort to masturbation as a "way out," a way of "forgetting." The result is that habits of problem-solving come to be self-confined, leaving the original problem still unsolved. This in itself is bad. In addition, it takes only a possible justifiable extension of thought to conclude that such habits may interfere later with the heterosexual satisfaction which we should desire that marriage would give the child when grown. The fourth possible danger of masturbation is without doubt the greatest danger. As a result of training, either direct or indirect, the child may feel that masturbation is both harmful physically and bad morally. If he really believes this and does not continue to masturbate, probably no psychic harm results unless he worries over previous masturbations. Many a child, however, feels unable to discontinue the practice and each such act is followed by anxiety and remorse. These psychic traumata are, according to most authorities, worse by far than any possible physical results of masturbation. It is in connection with these psychic results that much of the confusion as to cause and effect in regard to masturbation has arisen. The literature of psychiatry and abnormal psychology is full of examples, for instance, of "hand-washing" neuroses in which the patients go about washing their hands throughout the day almost continuously to the point that they accomplish nothing else. Study of these cases often reveals that the compulsion is symbolic and the patients feel they must wash their hands because they have been masturbators. Certain other insanities also show morbid and pathological regret over masturbation. The facts, however, seem to indicate that such patients have had masturbation in their history, just as they may have had some alcoholism, overindulgence in food, overwork, or late hours. Because of their *conflict* and *anxiety* in regard to masturbation, which is not evident in regard to other indulgences, they come to blame their "wickedness" for their unhappy state.

Feeble-minded children show a somewhat larger incidence of masturbation than do children of normal intelligence. Their feeble-mindedness, however, can in no way be proved to be the *result* of masturbation. One might rather say that their feeble-mindedness, with its restrictions of interest and inability to profit by training, is a possible provocative *cause* of masturbation.

While there is justifiable reason for deprecating the earlier notions in regard to masturbation, yet, all things considered, it is not a matter to be treated lightly. We shall want to help the child, if possible, to grow out of the habit. In spite of all the literature available on the subject, this is easier said than done. The author knew one well-intentioned adult in charge of a children's institution who, when she found a child masturbating, would have him go off to himself and commit Bible verses. Just what verses were selected for their therapeutic powers was never revealed! Another institutional attendant, with more sadistic tendencies, would wash the little girls' hands just before they retired. The hands were not dried thoroughly, and red pepper was then spread over the fingers. The idea was that any little girl who masturbated after going to bed would cry out with the pain caused by the red pepper. An intelligent parent of the writer's acquaintance spoke of her son's chronic masturbation as her "cross." She would sit by the child's bed at night, by the hour if necessary, until he went to sleep. The child knew that she was sitting there to watch him and to keep him from masturbating. No doubt *he* too felt the "cross" was *hers,* not his, and therefore assumed no responsibility. It is easier to see the futility and the harm of such procedures than to recommend sure methods of cure. A few things, however, we do know. A child should never be punished for masturbating. Instead of driving him away from us and still farther into himself, we want to assure him of our understanding and help, at the same time making him realize that the problem is his. As Kanner (50) says, a child should never be "surprised" at masturbating or spied upon. If mechanical restraints are *ever* justifiable, it is certainly only in very rare and unusual cases. With older children the better attitude would seem to be: "Yes, little boys and girls sometimes do that, but you are older now and of course will want to stop it," or "The doctor says it will be better if you do not do it."

The attitude of both the child and the family are of extreme importance in helping a child overcome masturbation. Not only must the attitude toward masturbation itself be wholesome and sympathetically understanding, but every effort must be made to see that the child's emotional life otherwise is happy and serene. Perhaps nothing contributes more to masturbation than anxiety and other debilitating emotions. Emotional security, but without too much physical fondling and petting, is indicated.

Obviously all possible local irritation in the masturbating child must be removed. Pinworms, adhesions, or other anomalies of the genitalia, uncleanliness, skin eruptions, or too tight clothing must be considered as possible factors producing masturbation. Sometimes it is necessary to separate children if one or more children are making it hard for another child to stop the practice. Holt (45) recommends plenty of vigorous exercise, except horseback riding. Those interested in further study of masturbation may with profit read the following references: 1, 45, 50, 55, 57, 59, 67, 71, 80.

Homosexuality

Social workers must of necessity be familiar with the problem of homosexuality in general. In the broadest meaning of the term, we refer to those individuals who are excited and satisfied sexually by members of their own rather than of the opposite sex. There seems at present to be an unfortunate tendency to make rapid-fire and unwarranted diagnoses of homosexuality in certain quarters. Authorities differ as to the relative role of constitutional inborn factors and of accidental environmental factors in the etiology of homosexuality. One school of thought argues that homosexuality rests on a hormone basis and recommends medication accordingly. The reports of this therapy are not all in accord. Another group of research studies indicates that the etiological factor is a latent hermaphroditism. Quite a group of students of the subject claim that homosexuality is of genetic origin and cite as evidence the disproportionate number of male siblings in the families of homosexuals. While the usual ratio of male to female births, as mentioned in an earlier chapter, is about 106 to 100, in the siblings of large numbers of homosexuals studied, the corresponding ratios run around 135 to 100. Pharmacologic shock and electric shock treatments have been tried with varying degrees of success and failure. Psychotherapy in many cases seems not to bring about much change, in many cases apparently because the homosexual is satisfied with his condition and has no desire to change matters.

It is rather generally conceded, even by authorities outside the field of psychoanalysis, that maturity eventuating in heterosexual adjustment represents a growth process. All will admit that little children, as a rule, display no sex preference as to their playmates; that a little later they prefer friends of their own sex; and that only still later do they show attraction to the opposite sex. Now, as regards homosexuality, the question then arises as to whether all individuals are at certain stages homosexual in make-up; whether some fixate at a homosexual stage, perhaps because of an unfortunate experience; or whether individuals are predestined by virtue of inherent constitution to be either homosexual or heterosexual. The latter position has found part of its support in the fact that *some* but not all homosexuals have physical characteristics and mannerisms of the opposite sex. Rosanoff, in his most recent work (66 and 67), concludes that homosexuality is determined in the cells from which the individual originates and is therefore fixed at birth. On the other hand, some authorities feel that everyone is at a certain time in his development more or less homosexual. These students of the matter feel, furthermore, that homosexuality is not an *all or none* matter but is rather a question of *degree.* Some normal individuals may have in adult life slight degrees of attraction toward the same sex without being pathological at all. [In this connection it is of interest to note that Terman and Miles (78) have devised a scale for measuring degrees of masculinity and feminity.] The danger for adolescents of seduction by homosexuals is extremely great, of course, if a slight tendency toward homosexuality is thereby set into momentum which may lead to a permanent pattern of homosexual behavior.

In any event, there are *two* dangers which those of us who are working with children must avoid. Suppose it develops that some nine- to ten- or eleven-year-old boys (or girls) are indulging in mutual masturbation or other sex practices. It is extremely unsafe to conclude that these children are therefore all homosexuals, and then plan for their care (or institutionalization!) accordingly. There is no warrant, from a knowledge of children, for concluding that all children who engage in sex play with members of their own sex later become homosexuals. If this were true, the figures on the incidence of adult homosexuality would be much greater than they are. The *second* danger has to do with snap judgments of homosexuality in instances of "crushes." Many a perfectly normal adolescent girl develops a "crush" on an attractive upper-class girl, teacher, club leader, or physical director. Similarly, but less frequently, adolescent boys may temporarily become attached to a teacher, older boy, or club leader. However, unsuspecting and uninitiated adults sometimes allow such attachments to grow out of bounds before realizing what is happening. The antidote would seem to be plenty of wholesome recreation, plenty of activity where the sexes must work together; curtailment of opportunity for the adolescent to be alone with the object of his devotion, and, if necessary, a frank talk about the whole matter.

We are not at this point interested primarily in the cases cited by psychiatrists of psychoses in which the precipitating factor is "repressed and unconscious homosexuality." We are concerned, however, with children who may be going through a homosexual stage of development or may be constitutionally homosexual (depending upon the point of view adopted). For that matter, what we are about to say applies equally also to children in whom there is no danger of the development of homosexuality. The point at issue is the danger of attack or seduction by older homosexuals. Regardless of etiology, nevertheless, the case histories of adult homosexuals, in large numbers of instances, include seduction at some time in their early life. Unfortunately, homosexuals are distributed in all walks of life and are by no means, on account of their homosexuality, inferior intellectually. For this reason, there have been unfortunate instances of seduction by respected teachers, preachers, club leaders, caretakers, and administrators of institutions. If we happen to be concerned with one case, or several, where homosexual seduction has occurred within a given profession, we are in no wise thereby warranted in making a wholesale diagnosis of all members of that profession.

Care should be exercised throughout the life of the child that he have both adult and childhood contacts with members of both sexes. If the immediate neighborhood or home does not provide such opportunity, then Sunday school, public school, clubs, excursions, and other means should be afforded for such contacts. It is for this reason, among others, that many adults prefer coeducational training at all ages for their children; there seems to be warrant for such preference.

While it may appear to some to be stretching the point too far, there is perhaps a very real question as to whether we should allow children to wear the clothes of the opposite sex. Probably in the childish dramatics of the first few grades, an assignment of a role of the opposite sex with the necessary costuming may be wholesome in the very fact that it is *ignoring* sex. Beyond a relatively early age, however, the picture changes. It is difficult to be sure where cause and effect meet, but the fact remains that many homosexuals are attracted to drama where they can assume the role of the opposite sex, or to occupations such as ladies' tailoring or millinery, for example, where contacts and artistic creations are with and for the opposite sex. There is good reason to believe then that we should indoctrinate to the limit our boys into thinking that they are boys and will grow into manhood with all its functions; and our girls into thinking they are girls growing into womanhood with all its functions. For late puberty and adolescence, the writer very seriously doubts the wisdom of exchange of costume or theatrical role.

Further discussion of the subject of homosexuality may be found in several references listed at the end of this chapter: 45, 49, 50, 59, 66, and 67.

Sex Relations with Adults

Unfortunately, workers in protective agencies have to deal at times with children who have been the victims of the sex desires of adults. Pedophilia (paidophilia) is an abnormal adult condition characterized by a desire for sex relations with children. The anomaly is commoner among men than among women. Sometimes a whole neighborhood is distraught by the attacks and advances of such perverts as children go to and from school. Often the condition is associated with other forms of abnormality. Sometimes dwarfs or other physically immature men indulge in such practices. Fear of detection may lead to the murder of the child victim. Of course, the cases of incest where fathers have sexual relations with their own daughters are only too familiar to social workers. Reference (59) may be consulted for further discussion of this topic.

The literature on the subject of the psychic effect upon children of sex relations with adults is not altogether in agreement. Lay opinion would probably tend in the direction of thinking that such an experience could be nothing but psychically harmful to a child. An article by Bender and Blau (7) reviews the literature in this field. Bender and Blau also report their own study of 16 unselected, successive, prepuberty children admitted to Bellevue Hospital, following sex relations with adults. "They showed less evidence of fear, anxiety, guilt, or psychic trauma than might be expected," the authors say. Furthermore, the authors found evidence that their subjects were not entirely blameless: "These children undoubtedly do not deserve completely the cloak of innocence with which they have been endowed by moralists, social reformers, and legislators." Psychiatric examination and treatment of the aggressor are always indicated in such cases. In many cases, the *child* was "either a passive or active partner in the sex relationship" and "in some instances seemed to be the initiator or seducer." *Generalizations* on this point would seem to be fraught with danger.

Puberty Praecox

Puberty praecox is an unusual condition which nurses and social workers encounter occasionally. Daily newspapers often carry accounts and pictures of a youthful Hercules smoking a pipe or of eight- or ten-year-old girls who have given birth to babies. A few years ago we heard of a South American girl of less than six years who, according to newspaper accounts, was delivered of a fully matured baby. Wallin (86) gives an instance of a boy who developed a beard and deeper voice at age nine. Kanner (50) cites the case of a girl who menstruated in the second year of her life, was pregnant at eight, and lived to be 75 years old. Scheidemann (68) tells of a girl who menstruated at seven days of age, and of a four-year-old boy who looked like a ten-year-old and who had sex relations at eight. A case known to the writer began menstruating at about four months of age. The condition of puberty praecox is usually associated with glandular disturbances and is commoner among boys than among girls.

Mental acceleration does not, as a rule, run *pari passu* with such physical acceleration. Intelligence, in such cases, is more often below average than above average. Further discussion and case descriptions may be found in references: 15, 33, 34, 45, 50, 51, 53, 59, 68, 73, 86, and 89. All such cases obviously belong to the physician and the endocrinologist.

Endocrinology and Sex Development

A word from a psychologist may be in order at this point. Perhaps the best-informed endocrinologists of the day would be the first to say that deliberate stimulation or retardation of sexual development by the use of glandular therapy is still somewhat of a *terra incognita*. At the hands of those who are not experts, however, caution is less in evidence. A physician friend of the writer tells of a case of an underdeveloped, feeble-minded boy upon whom, rather against his own judgment but at the insistence of the mother, he tried glandular therapy. The sole result, so far as is known, is that one day the mother called the doctor on the telephone with pleased excitement in her voice. "Oh, doctor," she cried, "the new medicine is working. It has made my boy 'männlich' (manly). He has just attacked his sister." Another case with whom the writer has worked for several years has had a record of every known delinquency *except* sexual delinquency. An encephalogram recently taken in a hospital shows a very definite brain pathology which could easily explain the child's explosive and uncontrolled behavior. The parents, however, were unwilling to submit the child to the brain surgery recommended by the neurologist. Instead, they have continued their course from one physician to another. Now they are in the hands of a doctor who is administering "gland treatment" because the boy is "not developed sexually so much as he should be." One shudders to think what may result if sex activity *is* stimulated in this boy whose brain has never permitted his controlling any appetite or any emotion.

Hermaphroditism

Hermaphroditism (hermaphrodism) is a condition which children's workers do not often encounter. True hermaphroditism is very rare, since the technical term should be reserved for those cases in which the glands and organs of both sexes are present and functional. By far the commoner phenomenon is false hermaphroditism—an anomaly in the genitalia which makes sex determination difficult. An hypertrophied clitoris, for example, may be mistaken for a penis. Well-trained pediatricians, however, say that an adequate examination would always reveal the real state of affairs. Unfortunately there are cases on record where a questionable decision as to the sex of the child was made at birth, perhaps by a midwife or a member of the family. The child may have continued for years to live under the assigned sex until later development, perhaps at adolescence, made change necessary. The social and psychological concomitants of such change are, of course, most extreme. For a "girl" to change over to a "boy" would in most cases be much easier than for a "boy" to change over to a "girl" (26). References 45, 50, and 68 may be consulted.

Feelings of Inferiority

Much has been written about a child's feeling of inadequacy and inferiority when he believes his body to be inferior. Obviously this often applies to sex organs. Particularly in a boy is there likely to be emotional disturbance if he feels that his organs are smaller than those of other boys, or if he is the only boy who has been circumcised in the group to which he belongs. Molitch (58) has a contribution on the relationship of gonadal deficiencies and behavior disorders. Perhaps others besides the author have known cases where a boy's refusal to participate in swimming or gymnasium work was diagnosed as stubbornness when in reality it was embarrassment about real or imagined physical inferiority.

Sex Anomalies

Because of their possible relation to behavior disorders and also because of their frequent occurrence in medical reports, certain terms should be familiar to professional workers with children. It is not to be understood, of course, that either diagnosis or treatment is the function of these workers. Intelligent coöperation is more possible, however, when there is understanding. Male genital organs sometimes have deformities or anomalies of one kind or another. *Phimosis,* for example, is the condition in which the prepuce or foreskin is adherent to or constricted around the end of the penis. Circumcision is prescribed in such cases. The clitoris of the female may be *hooded* in a somewhat analogous way and may require surgical treatment. Occasionally the urethra which discharges urine opens on the dorsal or upper side of the penis. The condition is known as *epispadias.* When the urethra does not extend to the end of the penis but opens instead somewhat back and on the inferior surface the child has *hypospadias.* Another somewhat common condition among boys is the *failure of the testicles to descend* into the scrotum from the pelvis where they originate. Ordinarily this migration or descent takes place before birth. Failure to descend necessitates medical examination and advice. The medical examination of sex-delinquent girls usually reports upon the condition of the *hymen,* which is the somewhat irregular membranous covering surrounding the opening of the vagina. The hymen may vary considerably from one girl to another. Penetration by the penis is, in some cases, possible without rupture of the hymen. The hymen, however, is usually stretched or ruptured on the occasion of the first sexual intercourse. To quote Sherbon (70): "The intact condition of the hymen was formerly taken to be evidence of virginity. It is now known that there are many instances of vestigial membrane, and this with other reasons combines to make examination of the hymen unreliable as a legal social test." This caution is most timely. The writer has had experience in which the claim was even made that examination of a *boy* would reveal whether or not he had had sexual intercourse (and this quite aside from the question of infection).

If it were not for the fact that the case histories and medical reports which professional workers use contain so much that is abnormal, it would not be necessary here to mention some of the perversions that children commit or have committed upon them. Sometimes, however, technical terms are used without the worker's knowing what they mean. Occasionally words are even misused by workers, as witness one worker who reported that a boy was guilty of *sodomy*. Interview by a male psychologist revealed such ignorance and innocence on the part of the child that the psychologist felt it unwise to question the child further. More discussion with the worker showed that what she had meant was "incorrigibility." She had thought the two words were synonymous. *Sodomy* usually refers to intercourse between males by the anus (although the term is sometimes used to include bestiality). *Pederasty* (paederasty) is coitus practised on boys by the anus. *Bestiality* is applied ordinarily to sex relations with animals, but sometimes, by extension of meaning, to other sex behavior "which resembles that of beasts." *Fellatio* is sex relation by taking the penis of another into the mouth. *Irrumation* is putting the penis into the mouth of another. However, this distinction is not always made. *Cunnilingus* consists of applying the tongue to the female genitalia. *Fetishism* is an unnatural sex attachment to certain objects, such as hair, parts of the body, or articles of clothing. Much bizarre behavior, such as surreptitious cutting of girls' hair, or stealing certain articles such as shoes is often explained by fetishism. *Sadism* is sex gratification brought about by inflicting pain upon others, and *masochism,* by suffering pain one's self. *Exhibitionism,* which is often one of the sequelae of encephalitis, of some of the deteriorating psychoses, and sometimes of mental deficiency, consists of inappropriate display of the body, particularly of the genital organs. It must be understood that the term does not apply to the display which little children often make of the genital organs. By extension, the term is sometimes figuratively used to include any effort to put one's self into the limelight. *Nymphomania* is a condition of constant sex excitability in females; *satyriasis* is the same condition in males. *Coprophilia* is an abnormal and sex-satisfying interest in feces and urine, while *necrophilia* is morbid sex attraction to dead bodies. *Peepers* (*voyeurs*) are those individuals who attempt to obtain sex gratification by spying upon others who are at toilet, are undressing, or are having sex relations. Treatment of such conditions, of course, lies in the hands of psychiatrists.

Sex Delinquency

The gruesome list of sex perversions (those committed by and upon children) already discussed indicates that sex as such constitutes a large part of juvenile delinquency (69). According to Kanner (50), in 1930, 88 courts of the United States reported 2 per cent of boys and about 21 per cent of girls who were arraigned for sex offenses. The ratio is higher for girls in all studies of juvenile delinquency, although masturbation and homosexual activities are more often reported for boys. In addition to the instances of overt sex delinquencies, we must consider the other delinquencies in which sex is a largely motivating but hidden factor. Running away from home, for example, is often motivated by fear of punishment for sex offenses, desire to find opportunity for sex gratification, or anxiety about sex problems. Truancy likewise often has either individual or gang sex activity in the background. Stealing is sometimes, according to many authorities, conditioned to sex. Suppose, for example, a boy is introduced into sex practices with all the attendant excitement. Either as a part of the ritual or as a means of self-protection for the other members of the gang, he may be required on the same occasion to go out and steal something which he must bring back to the group. In some highly unstable individuals, a connection between sex and stealing may be so intense that thereafter the only means of finding sexual relief is to steal.

Another pathology connected with sex must not be overlooked, and that is the braggadocio or even pathological lying that sometimes occurs in regard to sex behavior. In an attempt to appear like "he-men," boys will often greatly exaggerate the accounts of their sex behavior. The motivation may be merely a desire not to be outdone by other boys. This difficulty is often encountered in institutions where delinquents are segregated. Girls likewise often do not hesitate to give themselves a very bad reputation for the sake of talking about sex. Oftentimes, the tales of girls involve men who may actually be innocent. Cases have occurred where girls have elaborated their accounts, brought criminal charges, gone into court, and then, after besmirching their own and someone else's name, retracted the whole story. Here again, psychiatric diagnosis and treatment are needed.

Literature

Social workers, nurses, visiting teachers, and other professional workers can do much in the way of enlightenment by always keeping on hand, ready to be put into the hands of parents and children, good publications on sex life. This is not to overlook the fact mentioned before that *information* is no *guarantee of right behavior.* It is merely a step in the right direction. Pamphlets, some of which are free, can be secured from the United States Public Health Service, Washington, D. C.; the American Social Hygiene Association, New York City; the Child Study Association of America, New York City; and the Children's Bureau, United States Department of Labor, Washington, D. C. Parents may also appreciate an opportunity to read the following: 2, 4, 20, 76, 77.

The Normal Child

In closing this chapter, it must be remarked again that the contents are not at all those that would be put into a manual for parents or into a college textbook on child psychology. Unfortunately, however, professional workers with children must spend a certain part of their time and professional service dealing with the abnormal. This is so true that the writer is inclined to the opinion that every such worker must, if he or she is to keep a fine social perspective, make it his or her business to acquaint himself with, and associate with, *normal* children as much as possible. After working for a week or two at a time in an institution for delinquent girls, the writer always feels that she must "come up for air," so to speak. Sex delinquencies change their appearance, to her, if she takes too large a dose at one time. She finds that she needs to return to fine normal homes which attempt to give children intelligent information, a wholesome acceptance of the facts of sex life, and finally an appreciation, on the part of both boys *and* girls, of the beauty and desirability of sex relations when they represent both physical and psychological union in marriage.

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Chapter XII

THE CHILD'S INTELLIGENCE

Nature of Intelligence

Before one goes very far in professional work with children, he finds cases where it is necessary to have intelligence tests administered (1, 32, 41, 42, 79, 83, 84, 94). In order to obtain full value from reports on intelligence tests, one must know something of the *theories of intelligence* that are involved in test construction.

Definitions of Intelligence

Machiavelli, in *The Prince,* written in 1513, said, "There are three scales of intelligence; one which understands by itself, a second which understands what is shown it by others, and a third which understands neither by itself nor on the showing of others." In more recent times Artemus Ward said, "One thought you have born and raised on your own premises is worth a whole orphan asylum of other people's thoughts." These two statements, though years apart, seem to point in the same direction—namely, that independent thinking and intelligence have much in common. Psychological literature of the last 15 or 20 years has contained much discussion and debate as to the nature of intelligence (95). The controversial questions as to the nature, definition, composition, and measurement of intelligence need not concern us here. One definition by Meumann (95) has received favorable acceptance by many and seems as satisfying as any. "Intelligence," Meumann says, "is the power of independent and creative elaboration of new products out of the material given by memory and the senses—the ability to avoid errors, to surmount difficulties, and to adjust to environment."

During World War II, the writer was invited to lecture to a class in one of the government's courses in engineering, science, management, and war training. This was a class of adults, all doing personnel work in industry, and the topic for the evening was Testing in Industry. At the beginning of the class meeting, the regular instructor of the course was asked if it might be taken for granted that his students were keeping abreast of the times by doing current reading. Assurance was given that such was the case. The visiting lecturer then asked the class to listen attentively and see if they could recognize a quotation which was to be read and identify its source and author. The quotation follows: "In the first place, no two persons are born exactly alike, but each differs from each in natural endowments, one being suited for one occupation and another for another. . . . Now, is it not of the greatest moment that the work of war should be done well? Will *it* not also require natural endowments suited to *this* particular occupation? Then apparently it will belong to us to choose out, if we can, that special order of natural endowment which qualifies its possessors for the guardianship of the state." Opinions as to the authorship of the quotation included Manpower Commissioner Paul McNutt, Secretary of Navy Knox, and Secretary of War Stimson. The instructor of the class thought the quotation "sounded like Stettinius." As a matter of fact, the words came from the Republic, Book II, written by Plato (427-347 B.C.). Recognition of individual differences and the need for measuring those differences is really a very old concept in man's thinking.

Characteristics of Intelligence

Because of the current confusion in terminology and the divergence of opinion as to what constitutes intelligence, it may make for clarity if *a* position is taken from which to consider the topics under discussion. The author is therefore arbitrarily stating here a point of view which she has already expressed elsewhere (98)[1]:

> (1) Intelligence is here being assumed to be an innate, inherited sort of thing that can be influenced by environment only in about the same way that one's innate physical tendencies toward a certain ultimate stature, eye-color, or resistance to disease are modified. It is assumed that either intelligence or innate physical tendencies may conceivably be handicapped by disease or trauma, but it is also assumed that no amount of educational opportunity on the one hand or courses of gymnastics or balanced meals on the other hand will increase by one whit the *potential tendencies.*
>
> (2) It is further assumed in this discussion that intelligence at birth has back of it the potential tendencies referred to above, but that growth will enable these tendencies to attain their maximum degree, much as growth will finally make out of an Italian child a man of a certain height, but will make out of a Norwegian child a man of a different height. The potential

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[1] From Florence M. Teagarden's *"Are We a Nation of Morons?"* by permission of *Industrial Psychology.*

growth rate, we say, is present at birth for both body and mind, but growth itself is far from complete at birth.

(3) It naturally follows that growth will be complete someday, possibly long before death or even before middle age, and this in intelligence as well as in bodily equipment. We need not produce graphs or charts to convince anyone that on the average people attain their final height at from 18 to 21 years of age. We do not grow indefinitely.

(4) A further hypothesis is necessary. What does it mean to say that a boy has attained his full height or his full growth at, let us say, 19 years of age? We may, as some families do, measure him on the door-post on subsequent birthdays and find no change whatever on his succeeding birthdays. He has grown all he ever will. What does this imply? Does it mean he will never be able to learn to do new things with his own height and length of limb thereafter? Surely not. He may learn to dance at 20, to skate at 25, to ski at 30, and to play golf at 40. In these latter cases he is simply learning to do new things with the amount of body which he has had for some time and of which he will never get any more (unless it be mere adipose tissue). The ultimate destiny of his body, furthermore, as regards size, was written in the germ cells of the parents from whom he sprang.

(5) One further point we must postulate. At 19 the boy may be as tall as his father. Does it follow, because he has the same length of bone and muscle—even his arms may be the same size as his father's—that he can endure the same strain as his father or can even use his muscles to as good advantage as his father can? Our inevitable answer to such a question is, "Why, of course not. His muscles are not *developed* yet as are those of his father." Oh, so there is something else besides mere growth? There may also then be development? And if so in body, why not in intelligence?

What, then, can be said about the intelligence of this same boy? (1) The quality and the potential quantity of his intelligence are determined at birth as is his ultimate height (barring, of course, as before, the effects of certain sicknesses or accidents). (2) His intelligence grows in amount as his body grows, not necessarily at the same rate, but probably somewhat after the same fashion. (3) His intelligence also stops growing sometime, just as his body does. (4) Learning is still possible after maximum quantity of intelligence has been attained. (5) There is also the possibility of development of some of the physiological factors of intelligence, such as brain connections, quite aside from mere growth of these parts.

Inheritance of Intelligence

Resemblances in intelligence between siblings, twins, parents, and children, and other questions of inheritance have already been discussed in Chapter II.

Correlation of Traits

Two traits or functions are said to be *positively correlated* when an increase in one is accompanied by an increase in the other; or when a decrease in one is accompanied by a decrease in the other. Two traits or functions are *negatively correlated* when an increase in either is accompanied by a decrease in the other. Two traits have *zero correlation* when an increase or decrease in one is accompanied by no change in the other.

By and large, nature's rule seems to be one of positive correlation. In the main, excellences go together in one individual and weaknesses go together in another individual. Much as *social compensators* might wish it otherwise, the fact remains that "unto him that hath shall be given and from him that hath not shall be taken away even that which he hath," biologically speaking. There is no evidence that because an individual is blind, he therefore has keener hearing. Not all blind people are musical by any manner of means. Neither do all blind people have a keener sense of touch. This does not disprove the fact, of course, that a blind person may develop *habits of depending upon and interpreting auditory or tactual information* to a far greater extent than is necessary for sighted people.

Physical and Mental Traits

What about other correlations? How do physical and mental traits within an individual correlate? When it is remembered that body, sense organs, and nervous system all develop from the same bit of fertilized germ plasm, it would be surprising indeed if positive correlation were *not* the ordinary state of affairs. Newspaper accounts of 50-year college reunion classes sometimes make note of the fact that the *survivors* of the original class are the honor or top-ranking students in the class. Baller (5) followed the later careers of 206 individuals who in elementary schools were classified as mentally deficient. Approximately nine years after leaving school, "the death rate for the mentally deficient is seven times that for the control subjects—a circumstance which calls for a careful study."

Obviously such examples as the two just cited do not by any means indicate that all dull people die before any bright ones of the same age. Popular opinion, however, seems to reverse that actual state of affairs. One often hears the expression, "That child is *too* bright!" This is likely to be accompanied by a shake of the head which seems to indicate that because the child is bright he will surely either die before his time or come to some bad end. In Hollingworth's study of superior children (38), she found that these children "are not only heavier, but are *heavier for their height,* than average children, age for age." In Terman's study of gifted children (103), it was found that these children were on the average from an inch to an inch and a half taller than unselected children of corresponding ages in California. The age for the beginning of walking, talking, and dentition have also been found to be somewhat less than for children of average intelligence. Many more evidences might be given as to the physical development of superior children. Suffice it to say that no scientific study has ever found them to be physically below par *as a group,* nor has any evidence been found that their mental superiority is at the expense of bodily vigor. Statistical studies which report degree of correlation mathematically show that the *amount* of correlation between health, strength, and physical ability on the one hand and mental ability on the other hand is not large, but the *nature* of the correlation is positive (5, 21, 38, 39). It must be remembered that *every* intellectually superior child is not well endowed physically; neither is *every* feeble-minded child poorly endowed physically or socially.

Correlation Between Various Mental Traits

In the matter of resemblance between different mental traits or functions within an individual, positive correlation also holds good. This is to be expected, since all mental functions within an individual operate through the same brain and nervous system. Nevertheless, different functions also require the coöperation of different sense organs and muscles as well as the activity of the brain and nervous system. Handwriting, for example, requires brain, hand, and arm activity and, for sighted individuals, eyesight as well. Music requires auditory acuity and either voice or finger activity. Drawing, reading, mathematics, and language could all, if properly analyzed, be shown to require particular sensory, muscular, and nervous activity. For this reason, a superior person is likely to do well all things which he has practiced, which interest him, or in which he has been trained, but some of them he will do better than others. A person of average intellect similarly will probably not be peculiarly outstanding in anything. Even so, he will do some things better than his own average and some things more poorly than his own average. The defective or feeble-minded person becomes the social problem that he is largely because he is, as a rule, poor in practically everything. He, like others, however, may have his own peculiar excellences, but even so these, no matter how brilliant, by contrast, they seem, will be poor compared with the abilities of the average or superior person.

Special Talents and Defects

Partly because of dependence upon particular sensory acuity and partly because of inventive short-cuts, particular interests, and the like, we *occasionally* find an individual who has one ability which seems to stream out far beyond the individual's average in other things. Extreme examples are the *idiots savants* who, though very defective, may have one talent of some considerable proportion. These persons attract our attention largely because they *are* rare. It must be borne in mind that critical evaluation of so-called "talents" is always necessary. Sometimes a child is seen who has a great amount of skill or information in a field that has no value whatsoever. Indeed, these spectacular but worthless accomplishments may in themselves be indications of very poor mental hygiene. Occasionally one finds a feeble-minded person with a flare for reproductive art or reproductive music (note that these are *reproductive, not creative*). Occasionally also, we hear of "lightning calculators" who amaze people by their speed and memory for mathematical calculations. Of course, some of these individuals are mathematicians in the real sense of the word. Some, however, are average or less in intelligence and can perform only very mechanical computations. Other individuals may have particular weaknesses which seem inconsistent with their general level of ability and may be due to particular sensory weaknesses. Sometimes they are more apparent than real and may be caused by emotional blocking or poor morale. Extreme deviations, either up or down, from the rule of positive correlation are rare (38, 39, and 40).

One further point must be made in this connection. Occasionally, visiting teachers and social workers encounter difficult children who seem, nevertheless, to have a certain degree of ability in some particular line. A case recently seen by the writer may serve as an example. The girl was an unmarried mother with an intelligence quotient of 80. The summary from the social agency noted, "She does not like to read and does not have a library card," which is not surprising in view of her intelligence and her social (?) interests. The summary also indicated that the client "would like to take up commercial art"; and vocational guidance in this particular was requested. When the girl was questioned about whether she could draw, she replied: "Oh, yes. I never get no one to do my drawing for me." She then produced some drawings of movie actresses which she had copied from magazines. Her ability to guide a pencil was somewhat superior to her ability to guide other activities in her life, it is true. In helping the girl decide what she might do, however, one must take into account her ability to learn, to take directions, to initiate, to persevere, and to get along with others in the business world. Drawing for this girl perhaps as an avocation, yes; as a vocation, no. Similarly with music, and more recently with tap dancing, there arises the necessity of deciding whether there is sufficient of *all* the traits that are required for success. In the minds of many, a little ability in *one* field is synonymous with vocational aptitude. As a matter of fact, fitness for any vocation is a highly complex matter and requires to greater or lesser degrees many traits and qualities.

Mental and Social Traits

In regard to correlation of mental and social capacities, positive correlation is likewise nature's rule. Superior children on the whole have not been found to be one-sided in interest or unpopular socially. On the other hand, controlled studies have shown that, as a class, they tend to be leaders, to participate in more than the usual number of extracurricular activities, and to be dependable. One cannot overlook certain facts, however. Bad mental hygiene may be allowed to develop even in superior children, *particularly* if their superiority is not recognized and provision is not made for it. If superior children are compared with others their own chronological age rather than with others their own mental age, they may appear "queer." It is hard, in fact, for superior children to have an opportunity to work with, or be compared with, their intellectual peers. Feeble-minded children as a group tend to rate lower in social skills than average children. They rate relatively higher on a social maturity scale than on an intelligence scale when they have been reared in superior surroundings.

Amentia and Dementia

Much confusion exists in the minds of the laity, and even, indeed, in some professional minds, as to what constitutes feeble-mindedness and what constitutes insanity. Recently a physician asked the writer to give an intelligence test to a child because, he said, "I suspect that she is *mental*." What he meant was, "I suspect she is defective or feeble-minded."

Such confusion can perhaps best be avoided if we understand that intellectual differences between individuals are *quantitative* rather than *qualitative*. The writer at one time examined a very seriously defective five-year-old boy. The child could not talk at all, understood practically nothing that was said to him, and, except for walking and climbing, had mastered almost none of the physical or social skills that two-year-olds have. During the course of the examination the boy climbed up onto a table, lay flat on his stomach, and turned over and over and over in his hand a one-inch cube which had been given to him. In the course of this random play, he dropped the cube to the floor, squirmed over to the side of the table, and looked after it. "There," exclaimed his mother, "you see he isn't defective! He has memory. He remembers that block." The mother was speaking from a *qualitative* point of view. She was saying in effect: "My boy is not defective or feeble-minded, because feeble-minded people don't have any memory. That is a *quality* which they don't possess." The psychologist, speaking from a *quantitative* point of view, was saying in effect: "This boy is quite feeble-minded. At five years of age, he has a memory of about the degree or *quantity* that six- to nine-months-old babies have." Feeble-minded children have memory, judgment, reasoning, understanding, association, and learning ability, but in less degree than normal children.

Amentia or *hypophrenia* is the name given to feeble-mindedness. Feeble-minded individuals are those individuals who have mental deficiency existing from birth or from an early age. Feeble-mindedness also includes "secondary" cases where the deficiency "depends on and is a consequence of some underlying misfortune to the nervous tissue, but for which the child would have been of normal intelligence." (40) Syphilis, glandular dysfunctions, abnormal growths in the brain, hydrocephaly, encephalitis, meningitis, epilepsy, and sometimes brain injury may produce such secondary deficiencies. *From other than such secondary causes, people do not become feeble-minded;* by far the largest number of feeble-minded children are born mentally deficient.

Dr. Mateer (64) uses an example that serves to illustrate the difference between low-grade intelligence and mental illness (insanity). She mentions automobiles of different quality and price. These might be made to stand for different varieties of intelligence; that is, feeble-mindedness (cheap), average intelligence (medium-priced), and superior intelligence (high-priced). Up to this point we have been speaking of minds as they come at birth and cars as they come from the factory. Any kind of car, however, can get out of order, even to the point that it will not run. So likewise can a mind, regardless of its original goodness or quality, get out of order. Such conditions belong to *dementia* rather than to amentia. As we shall see elsewhere, the very lowest grades of intelligence do not become insane. Higher grades of the feeble-minded, however, may become emotionally deranged.

An interesting question arises at this point. In view of what we have said about the positive correlation of traits, does it follow that superior minds have a better chance of remaining in good functional condition? Do feeble minds get out of order more quickly than better minds? So far as ability to withstand strain and disease, perhaps yes. That is, within limits, it is safe to say that the better the mind, the better the stuff out of which it is made. There is a second consideration which must be added to these statements, however. A large part of the etiological factor in dementia or any of the functional brain disorders is *conflict, worry, stress,* and *nervous strain.* While the superior mind may be better able to *withstand* these factors, on the other hand it has *more* of them *to withstand.* The more feeble-minded an individual is, the less he has to worry about.

The Intelligence Quotient

Reports from psychological clinics have so much to say about intelligence quotients that we should understand how they are derived and what they mean. By the use of intelligence tests (we shall confine our discussion now to *individual intelligence tests*), we can secure for a child a so-called *mental age.* This means that, according to the findings of the test, the child's general level of intellectual ability—his ability to learn, not what he has learned—is about that of children of the age designated by his mental age. For example, to say that a child has a mental age of six means that his intelligence is about on a par with average children entering school at age six. He is about ready to learn the things they are ready to learn and can do intellectual tasks which the average six-year-old child can do. This does not tell us, however, whether the child is bright, average, or feeble-minded. If it has taken the child twelve years to reach this mental age, he is very feeble-minded. If he has reached this point in six years of life, he is average in intelligence. If after having lived only three years, he is on a par with six-year-old children, obviously he is very bright. In other words, then, to get a measure of a child's ability in order to make predictions about what he may be able to accomplish, we need to know the *ratio* of his mental age, secured by the use of an intelligence test, to his own life age. The intelligence quotient, therefore, is mental age divided by chronological age, usually written I.Q. = M.A. divided by C.A. Since, as we shall see later, there are many different intelligence tests, some of which are more accurate and reliable than others, the name of the test used should always be given in reporting a child's I.Q.

Importance of Chronological Age

It is evident that it is of the utmost importance to have the exact and correct chronological age in order to determine the intelligence quotient. This is not so difficult as formerly, since, in this country, it is usually possible to ascertain verified birth dates from local bureaus of vital statistics. As every social worker knows, however, securing verified birth dates is not always so easy as it should be. For one thing, children's births are sometimes reported under one name and the child may go to school under another name. Furthermore, curiously enough, hospitals and other agencies sometimes still record a child by approximate age rather than by exact birth year, month, and day. The writer has had frequent experience with cases for whom it was never possible to determine an intelligence quotient for the reason that it was never possible to determine the child's exact age.

At least one further necessity for knowing a child's chronological age must be illustrated. A few years ago the writer studied a child referred by an orphanage. Intelligence tests revealed that the child was of perhaps "low average" intelligence. Unfortunately, however, only a short time before she was examined had her actual age been discovered. *Discovered* is used advisedly, since prior to that time it had been thought that she was two years older than she later proved to be. She had been started in the first grade at school two years too soon and had had two failures of promotion into the second grade. Had she started to school when she was actually six years old, the work might not have been any too easy for her, but she probably would have passed. As it was, the child's only experience with two years of school was one of failure, wondering what it was all about, and no doubt chagrin and embarrassment—all of which might have been prevented had her real age been known. One wonders to what extent this child's attitudes toward school and learning have been permanently and needlessly colored with a dismal hue.

Constancy of the I.Q.

A teacher who had displayed a kindly interest in a defective girl was once heard to say: "She had an I.Q. of 58. She stopped in the third grade. I just know if I could have kept her in school longer I could have raised that I.Q." The teacher was confusing cause and effect. The child left school because she had an I.Q. of 58; she did not have an

I.Q. of 58 because she went only to the third grade. There would not be much point in determining I.Q.'s if they changed greatly with more or better instruction, with improved health, or any other improvement in environment (47, 99). In other words, the greatest justification for obtaining intelligence quotients is that they supply us with material with which to predict and plan for the child. There is no point in planning college education for a ten-year-old child who has an I.Q. of 130 *if* there is no reasonable certainty that the I.Q. will remain somewhere in the neighborhood of 130. Similarly, we do great injustice to a child with an I.Q. of 50 by putting him into an institution for the feeble-minded *if* his I.Q. is likely to rise and eventually reach 80, 90, or 100. The critical point, then, seems to be how constant *is* the I.Q. Numerous studies may be consulted on this point (13, 51, 54, 72, 77). As regards I.Q., the average deviation from one examination to a subsequent examination is reported by these various studies to be about five points in either direction. In other words, most children who, on first examination, are found to have I.Q.'s of 90 will on second examination probably have I.Q.'s no higher than 95 and no lower than 85. To say that the *average* deviation in I.Q. from one examination to another is about five points means that some children show no deviation at all, whereas some children show deviations in excess of five points.

It appears that the I.Q.'s of the feeble-minded "stay put" somewhat more consistently than the I.Q.'s of superior children (5, 13, 38, 40, 42, 54). Likewise, some claim that the I.Q.'s of older children are more reliable than the I.Q.'s of very young children.

Within the last few years some startling statements about the "wandering I.Q.," which can be made to go up or down through changes in schooling and other environmental factors, have come from a prominent psychological clinic. The University of Iowa has given great publicity through the daily press and radio, to say nothing of professional journals, to the changes its workers claim to have been able to bring about in intelligence ratings through environmental changes. Their studies include, among others, the following: improvement of intelligence through attendance at Iowa nursery school; decrease in intelligence when subjected to environmental deprivations; improvement of intelligence in superior foster homes; cure of feeble-mindedness by special training in an institution for the feeble-minded. To quote Dr. Florence Goodenough, of the University of Minnesota (30), "One is tempted to be somewhat facetious about the last of the Iowa studies, which purports to show that moron nursemaids in an institution for the feeble-minded are able to stimulate the mental growth of feeble-minded children placed under their care to a degree that makes the best efforts of the University of Iowa child welfare experts seem feeble indeed." Thirteen of these children, it is claimed, gained, on the average, 28 I.Q. points in from 6 to 24 months, whereas children in an orphanage under the supervision of Iowa staff and students were said to have raised their I.Q.'s, on the average, 4.6 points in 400 days.

Public attention has naturally been attracted to these statements. Perhaps the readers of this book would be most concerned about two aspects of the startling claims of the Iowa group. In the first place, other investigators and other clinics do not get the results indicated by the Iowa publications. It is, therefore, scarcely likely that data from one research center will eventually disprove the findings of innumerable researches accumulated for many years by many investigators. In the second place, readers will be impressed by the studies made by competent statisticians who claim that the Iowa data have been treated by inappropriate and fallacious statistical methods (30, 65, 66, 89, 90). For all practical purposes, the professional worker may continue to believe that in the large majority of cases the I.Q. is relatively constant, the average deviation from one test to another being about five I.Q. points in either direction.

Children Whose I.Q.'s Deviate from Time to Time

There are children who show more than average deviation in I.Q. from one test to another. These children have caused much concern as to the reliability of the I.Q. technique. In certain clinics where psychotic children, prepsychotic children, emotionally traumatized children, or children with brain injuries or certain disease entities are likely to be examined in large numbers, unwarranted disavowal of the I.Q. is likely to be expressed. It must be kept in mind that if *all,* or a large part, of a certain clinic's cases happen to be from the possible 15 to 20 per cent of children whose I.Q.'s change as much as 10 points or more, constancy is still not violated for the other 80 to 85 per cent of children. Where the deviation is 10 points or more, careful analysis must be made to determine the causes (100). One thing must be kept in mind—that is, that neurotic and psychotic individuals do not necessarily fluctuate in I.Q. any more than do normal individuals (87).

Furthermore, a trained clinical psychologist, provided with an adequate medical and social history of the child, and working face to face with a child, can be expected to detect signs when and if the child is not performing at his own maximum capacity. Notes to this effect are a common datum of psychological reports. There are also techniques devised by psychologists for analyzing test performance in order to determine and measure possible deterioration (81).

Dramatic reports of children with great change of I.Q. sometimes get into the literature. Before allowing spectacular and exceptional I.Q. fluctuations to challenge the essential constancy of the I.Q., such cases should be analyzed for: tests used, skill of examiner, marginal successes and failures, adequacy of medical report, evidences of emotional upset, degree of rapport, and possible coaching on test items. In most cases where great change has been reported, skilled investigators have been able to trace the deviation to some factor other than an actual change in the child's intellectual capacity.

Influence of Environment Upon Intelligence Quotient

In Chapter II, we discussed the possibility of improving intelligence by improving environment and saw that the hope was scarcely justified. References there may be consulted. Former hopes of raising I.Q.'s by the removal of tonsils and by improving nutrition likewise seem ungrounded.

Other Considerations of the Constancy of the I.Q.

Two other points must be taken into account in regard to the constancy of the I.Q. One is that, as a rule, nothing very drastic or spectacular happens to intelligence at adolescence. Parents and sometimes physicians like to believe that the dull child will "outgrow it" or that the feeble-minded child will have a change of some kind come over him at adolescence which may be for the better. Intelligent parents of a child with secondary feeble-mindedness visited the writer. The physician had said: "Don't worry about your son. Just wait a few years and he will start to roll" (evidently meaning "start to progress more rapidly"). The parents had waited in vain for this speeding up. The facts do not bear out such hopes. Another instance of false belief in a supposed improvement of intelligence with increasing age occurred in the writer's experience. A very defective child was brought in for examination and educational suggestions. The child was hopelessly deficient so far as academic learning was concerned. The case was probably a genuine case of *secondary* feeble-mindedness. The parents reported that at about nine months of age the child had had a most severe attack of whooping cough in which, time and again, the child had become "black in the face" and had extreme anoxemia (deficiency of oxygen in the blood) with very probable brain damage. The family physician had later been consulted with a view to discovering whether this early whooping cough might have had a deleterious effect on brain development and intelligence. The physician assured the family that they had nothing to worry about, that the child would outgrow his present retardation, and that the anoxemia had occurred when the child "was too young" to cause any brain damage! Of course, one wonders about such an explanation in view of the fact that the illness had occurred at such an early age that the brain was growing very rapidly and therefore an accident would be likely to cause *more* rather than *less* damage than later in life.

Unfortunately for the clinical psychologist, it usually falls to his lot to tell the parents of the feeble-minded child that he will continue to develop but *at about the same rate,* that what he has lost in comparison with other children he cannot make up, and that he will never catch up. This is a most difficult task for a psychologist with sensitivity of feeling. The thing that makes the task possible at all is to keep saying to one's self, "If this were *my* child, I would want to know the truth so that I could plan for him accordingly and so that I would be sure I was doing what is right for *him as he is, not for him as I wish he were."* It is the writer's experience that mothers are somewhat more willing to face the truth in regard to retardation in their children than are fathers, probably because they have had more opportunity to compare development from one child to another.

Another gratuitous assumption is in the opposite direction. There may be in regard to superior children what Dr. Leta Hollingworth (38) calls *"the illusion of retrogression toward mediocrity."* By this, she means that in the first grade the superior child is competing with all classes of children, even some who are feeble-minded. By the time the superior child has finished the eighth grade, the most defective children are gone and he is competing against only those who are dull, average, or superior. By the time he has finished high school, his competition is with a still brighter class of children; by the end of college this is even more true. "This shift in the basis of competition explains why high school teachers are often disappointed in their predictions of brilliant college careers for those who have done well in small high schools." (38)

As regards the results of intelligence testing, it may turn out that a very brilliant child actually does get a lower I.Q. at age 14 than he did at age 10 for the simple reason that long before age 14 he may have successfully passed all the items contained in the test. In other words, the test may be providing no more worlds for him to conquer. He may long ago have "hit the top" of that particular test. The difficulty here is clearly in the use of tests that are inappropriate for him. It is a rule of testing technique that to make sure we have tested adequately we must use a test so difficult that there are parts at the top which the subject cannot pass.

Maximum Mental Age

In a previous paragraph, it was stated that intelligence and mental age do not continue to grow throughout life. The question then arises as to the point at which they cease increasing in amount. From biological analogy, it seems logical to suppose that the cessation is gradual rather than sudden. The age beyond which we need expect no more increase is important. So far as tests are concerned, we need to know how much mental age to provide for, and for what age limits we need to provide more difficult tasks. The highest attainable mental ages on various tests, to take a few examples, are 18, 19, 19½, 20, and on the Revised Stanford-Binet test (102), 22 years and 10 months.

In discussing the intelligence quotient, it was noted that the quotient is obtained by dividing mental age by chronological age. The divisor in this case obviously continues to increase in size throughout life, while the dividend does not. If we were to continue dividing an unchanging number by a divisor which is increasing, we should get decreasing quotients, of course. In the case of intelligence quotients, this would give the impression that intelligence was going downhill or decreasing in amount. Since we do not believe this to be true, some means have to be taken to keep the ratio or quotient from decreasing beyond the point of mental maturity. The old way of doing this was to try to discover the age beyond which we did not need to look for increase and then to keep the divisor constant from that point on. In other words, if 16 should be found to be the age, then no matter how much older than 16 the subject became, his mental age would always be divided by 16. Opinions have differed as to the age that should be selected. Terman originally favored 16. Pintner (77) has favored 14. Thorndike (104, 105), Freeman (27, 28), and Teagarden (97), have claimed that intelligence continues to increase in amount until the late teens or early twenties. The practice generally throughout the country has been to use 16 as the maximum divisor. Where 14 was used by a clinician, such practice was specified.

Teachers, social workers, and others have become so accustomed to the practice of dividing by 16 for older children that a new procedure now in use must be explained. It has already been noted that cessation of mental growth is not abrupt, but that it probably trails off, gaining by smaller and smaller amounts, until finally no increase is discernible. In order to provide for this, Terman and Merrill (102) have devised a scheme whereby the divisor does not *suddenly* stop increasing in size. Their revision of the Binet scale, about which more will be said later, is one commonly used in clinics. Therefore, we should understand the new method and thus avoid confusion when reading reports containing the new scale results. Terman and Merrill (102) say:

> We begin at 13 years to disregard increasing fractions of successive chronological age increments. From 13 to 16 we cumulatively drop one out of every three additional months of chronological age and all of it after 16.

In other words, for subjects chronologically 13 years, 6 months of age, the divisor is 13-4; for age 14-0, it is 13-8; for 14-6, it is 14-0; for 15-0, it is 14-4; for 15-6, it is 14-8; for 16 and all older ages, it is 15-0. This can all be read off from a table, and in any case is the concern of the clinical psychologist rather than of the social worker or teacher.

Use of Mental Age and Intelligence Quotient

Table XIV (page 393) is based *in part* on Terman and Merrill's revision. According to their scale for tapering off chronological age as a divisor in finding I.Q., the highest possible mental age, age for age, for a given I.Q. would be approximately as indicated in the fourth column in the table. It is well to know, for example in planning educational work for a child with an I.Q. of 70, that his ultimate reading level will probably be about that of average children of about 10 or 10½. The names in the first column of the table were suggested by Dr. Terman in his first revision work but are not included in his more recent book. In a magazine article (68), Dr. Merrill suggests that we substitute *mentally defective* for the older term *feeble-minded*. The particular names given to different categories of intelligence is a somewhat arbitrary matter, as is also the percentage of cases at which we arbitrarily draw the line between categories. The percentages and names in Table XIV are ones that are fairly familiar and are in rather common use. The third and fourth columns are approximations derived from many sources, while the last two columns are from the writer's own observation. These figures are approximations and differ at some places from approximations used in other texts. The percentage of feeble-minded in the population has been variously estimated at from one to three per cent. The maximum or ultimate mental age also differs from one author to another, depending upon the age taken to represent cessation of mental growth. The sixth column represents what *actually happens occasionally* when factors other than real accomplishment determine promotion and length of stay in school. The next column to the left represents what is perhaps the most common grade placement for a given mental age—in other words, the mental age necessary for real mastery of the grade.

Substitutes for the I.Q.

Efforts have been made by some psychologists to provide a way of measuring intelligence which would be more reliable than the I.Q. The *Heinis Personal Constant* is such an attempt. It makes use of "growth units" into which both chronological and mental age are translated. The latter is then divided by the former, as in the case of the intelligence quotient. This technique is not in so general use at present as the I.Q.

Attempts have also been made to devise intelligence scales of such a nature that it could be said the units of measure throughout the scale were all of equal value. For example, by the use of such a scale we would be sure that the difference in mental age, let us say, between six years and six years, six months on the one hand was exactly as great a difference as the difference between eleven years and eleven years, six months on the other hand. Thorndike's CAVD test (Completion, Arithmetic, Vocabulary, and Directions) is perhaps the best test so far to satisfy these statistical requirements (107).

Other devices, including percentile scores, standard scores, C scores, T scores, and F scores (111), are already familiar to those versed in statistical measurements, but need not be explained here since they are not in common use in the reports given to professional workers. For practical purposes, the I.Q. is still the most convenient and most easily understood method for reporting the intelligence of children.

Intelligence Tests and Vocational Guidance

While intelligence is undoubtedly a factor which must be considered in offering vocational guidance, it is by no means the only factor. Indeed, one is tempted to say that intelligence tests have negative value rather than positive value in this field. By that we mean that if a child has an I.Q. of 60, for example, we know he *cannot* become a railroad engineer. Suppose, on the other hand, we know that a child has an I.Q. of 140. This is certainly higher than the I.Q. of many

Table XIV

INTELLIGENCE DISTRIBUTION, CLASSIFICATION, AND ACADEMIC POSSIBILITIES

Classification	*I.Q.*	*Approximate Per Cent of Children*	*Approximate Ultimate Mental Age*	*Actual Accomplishment in School*	*Possible School Placement*
Near genius or genius..............	140 and above	.25	21 and above	Graduate work	Graduate work
Very superior....................	120-139	6.75	18-21	College and graduate work	College and graduate work
Superior........................	110-119	13.00	16½-18	High school or college work	College, graduate work(?)
Normal or average...............	90-109	60.00	13½-16½	Eighth grade, year or two of high school	High school graduation College (?)
Dull normal.....................	80-89	13.00	12-13½	Sixth to eighth grade	May enter high school
Borderline......................	70-79	6.00	10½-12	Fifth to sixth or seventh grade	Seventh or eighth grade
Feeble-minded...................	Below 70	1.00	Not over 10½		
Subdivisions of feeble-minded					
Moron...........................	50-69	.75	7½-10½	Fifth grade	Sixth to eighth grade
Imbecile........................	20 or 25 to 49	.19	About 2 or 3-7½	First or second grade	Third or fourth grade (?)
Idiot...........................	Below 20 or 25	.06	Not over 2 or 3	Not in school	Do not talk

successful medical school students. Does it necessarily follow then that every child with an I.Q. of 140 will succeed in medical school? Obviously not, for one may not have the *personal* and *emotional characteristics* necessary for medicine, or he may lack some of the special *aptitudes* for the profession of medicine.

In the practice of social work, the question of vocational guidance of clients usually concerns lower grades of intelligence. The most frequent considerations are: stopping school, securing work permits, entering trade school, or securing employment suitable to intelligence. As for trade school, vocational school, or prevocational school, matters other than intelligence again are involved. If trade tests, performance tests, or aptitude tests show that a child is as stupid in mechanical or manual work as he is in regular academic work, then trade school is obviously not the place for him. Too often the mistake is made of sending all failing academic students to vocational or prevocational classes. Appropriate trade and aptitude tests, which should first be administered, will be discussed later.

Table XV (pages 396, 397) is from Louttit's *Clinical Psychology* (55) and cites three authors (a, b, c) on trades suitable for given mental ages. Opportunity for placement still has to be met, even after possible range of choice is determined. The duty of society toward its less intelligent members is a great problem at this point. Vocational training and trade schools are among the most expensive of school services. We know that a child may be kept interested in school longer by reason of a chance to do manual things. We also know, however, that industry and the trades, if they can get helpers of average or above-average intelligence, will not accept dull or defective or feeble-minded students just because they may have gone to trade school. What to do vocationally with the lowest 10 per cent of intellect is a serious problem for which no adequate answer has yet been found. Individual work with such clients is sometimes made difficult also by the fact that dull or borderline individuals, like others, often have very decided vocational dislikes or very inappropriate ambitions. There is no one much more pathetic or much harder to help than a person whose ambition outruns his capacity. More detailed consideration of vocational guidance in respect to intelligence may be found in the following references: 5, 8, 9, 59, 63, 106, 115.

Infant Tests

The social worker and the nurse have a peculiar interest in infant testing (94). The social worker often meets the question of the adoption of babies. The nurse often needs to know whether a child under her care is developing properly. For these and other reasons, we need to know something about tests of infant intelligence. Before the appearance of speech, one of the best ways to measure an infant's development is by the use of tests of motor ability. We have already said that the correlation between mental ability and motor (or physical) development is positive but is not high. For this reason, among others, infant tests have obvious shortcomings. It is true that children who later prove to be superior tend, as a group, to master these motor skills earlier than children who later prove to be defective. However, illness, institutional deprivation, and many other factors make us reluctant to predict too much upon the result of infant tests. This does not mean that their use should be abandoned. In fact, all good psychological clinics use them. Perhaps it is safe to say that reputable clinical psychologists do not, as a rule, make final and definite statements of the intelligence of children under two or three years. In unusual cases prediction might be made earlier. For example, if a child is talking quite volubly at age two, is asking unusual and intelligent questions, has been talking for a year or so, walked early, and teethed early, it would seem fairly safe to say that one was dealing with a very intelligent child. Perhaps, even so, one would not say *how* intelligent. Also, suppose an 18-month-old baby was brought to a psychological clinic. His medical report was negative. There had been no illnesses. (There were no signs of rickets or of any disease of the central nervous system.) The child had been in a private family and had had individual attention and stimulation. Suppose, however, that the baby was barely able to sit up with help; would bear no weight on his feet; had very little articulation and made no attempt whatever at speech; paid little attention to persons or things around him; would hold objects in his hands but made little effort to reach out for them; paid little attention to speech directed to him. In such a case, the psychologist would probably not hesitate to recommend against adoption, or to say that the child was seriously retarded. In short, then, infant tests help to identify the extreme deviates, high or low; and by repetition, plus medical and social histories, they are of great value in measuring and estimating development. Infant tests are of more predictive value for infants that have had the stimulation that private homes are likely to offer than for infants in even the best of baby homes where less attention can be given to each baby individually. Further discussion of infant testing is to be found in Chapter IX in connection with our discussion of *adoption*.

Table XV

OCCUPATIONS SUITABLE FOR VARIOUS MENTAL AGES[2]

Boys

M.A. 5	*M.A. 6*	*M.A. 7*	*M.A. 8*	*M.A. 9*	*M.A. 10*
(a)	(a)		(a)	(a)	(a)
Rope braiding	Laundry work		Blacksmith helper	Shoe repairing	Carry mail (institution)
Stable work	Farm work		Repair mattresses		Printing
Clothes sorting	Dairy work		Painter's helper		
Handle freight	(b)	(b)	(b)	(b)	(b)
Brush-making	Mow lawn	Rough painting	Clean boiler tubes	Operate foot-power	Set and sort type
Handle garbage	Mix cement	Drive team	Load hay	printing press	Paint signs
Net making	Kitchen scullion	Plow	Cut hair and shave	Block paper into pads	Electrician's helper
Handle cinders	Bricklayer's assistant	Cane chairs	Shingle and set glass	Repair furniture	Steamfitter's helper
Garden work	(c)	Make brooms	Make wooden toys	Paint toys	Make forms for cement
(b)	Common laborer	Simple carpentry	(c)	Harvest crops	Shellacking and var-
Sandpaper furniture		(c)	Machine operator	Learn alto horn and	nishing
Scrub floors		Spray paint	(automobile industry)	drums	Learn bass horn and
Operate mangle		Clean automobiles	punch press	Fancy brush-making	cornet
		Teamster	trimmer	(c)	(c)
		Drive truck	buffer	Machine operator	Auto-top builder
		Helper on truck	drill press	tenoner	(hand)
			grinder	straightening	Operate gear-cutting
			sprayer	wire-bending	machine
			gluing	Shackling (food	Boilermaker apprentice
			leather cutter	products)	Shipping clerk
			Tempering clay (mach.)	Operate motion picture	
			Peddler	machine	
			Stock boy	Vest maker	
			Press clothing		
			Baker's helper		
			Lather		
			Assembling dials (elect.)		
			Feeding tack machine		
			Soldier		

OCCUPATIONS SUITABLE FOR VARIOUS MENTAL AGES[2]—*Cont.*

GIRLS

(a) Domestic work Operate mangle Prepare vegetables Sew carpet rags	(a) Hand ironing Fold clothes Hand weaving Knitting	(a) Hand sewing Machine sewing	(a) Rug weaving Basketry		
(b) Follow pattern in simple sewing	(b) Crochet open mesh Weave rag rug with pattern Simple laundry work	(b) Plain and Italian hemstitching Cross-stitch Braiding Simple packing of small articles	(b) Operate bead loom Stencil work Dress doll without help Operate scarf loom Make dresses cut out by others High-grade domestic work	(b) Knit stockings and mittens Make cloth toys Make pottery Operate automatic rug loom Cut out and make dresses Plain cooking Sew mounts on cards Sew buttons	(b) Raffia and reed work (pattern) Swedish embroidery Operate sweater machine Operate looper for stocking toes
(c) Folding paper boxes	(c) Operate small punch press	(c) Bunch maker (tobacco) Machine pack tobacco Bottle vinegar Fell sleeves by hand Case sausage Housework	(c) Factory inspection of auto headlights Baste canvas and patches by hand Serging sleeves (machine) Time keeper Operate tag-cutting machine Wrapping	(c) Core maker Operate drill press Assemble metal horns	(c) Sales girl

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[2] From C. M. Louttit's *Clinical Psychology*, by special permission of Harper & Brothers, publishers.

Administering Intelligence Tests

The question is sometimes asked as to whether it would not be a good thing if social workers and visiting teachers were trained to administer intelligence tests. The answer would seem to be a qualified negative. No professional person can hope to be a master of all the techniques of the allied professions, no matter how much he may depend upon their services. Obviously, however, the more we know about such services, the more helpful we can be to our clients and the better we can coöperate with our colleagues in the other professions. For this reason it might be well, for example, for psychologists and social workers to witness a blood transfusion, a Wassermann test, or a tonsillectomy. Each ought, perhaps, also to do some reading about these medical and surgical techniques and talk with physicians about them as opportunity offers. We shall, of course, neither prescribe nor diagnose, but we desire to be more enlightened and better able to coöperate. By the same token, it would seem that since the work of the nurse, the visiting teacher, and the social worker requires the mastery of so many skills peculiar to the particular profession, it is better to leave the administering of intelligence tests to someone within the profession of clinical psychology. The licensing of the latter profession is proceeding apace, and most communities now have the services of certified professional clinical psychologists. In some states, admission to opportunity classes, exclusion from school because of mental deficiency, and admission to institutions for defectives require the signature of a licensed psychologist. However, opportunity should be provided whereby professional workers who work with children may witness intelligence testing occasionally and, above all, may have occasion to discuss clinical findings with the clinical psychologist. Reading, consultation, and, if possible, witnessing an intelligence test occasionally will perhaps be all that is needed. These measures will at least save the professional worker from such illiteracies as: "*intelligent* quotient," "have the child I.Q.'d," or "give him an I.Q. test," or a "B and A Test" (Binet test).

Individual Tests

An individual intelligence test is one so arranged that it can be administered to only one child at a time. This means that the examiner and the child work face to face and usually alone. For this reason an experienced clinician can, by certain signs and symptoms, usually determine whether the child is working at his full capacity, whether he hears what is being said to him, whether he can read any directions that may be written or printed, whether the child is emotionally disturbed, or is suffering any physical pain at the time.

Individual intelligence tests are usually *linguistic;* that is, they require the use and understanding of language. They are also called *verbal* tests, which simply means that they require the use of words. They need not be *oral* in the sense of requiring spoken language by the child. As a matter of fact, some tests use printed directions and require written answers. The latter are verbal, or linguistic, but not oral.

Binet-Simon Test

The most commonly used individual test is some one of the revisions of the original Binet-Simon test devised in France. Dr. Terman, of Stanford University, made a revision of this test, known as the Stanford Revision of the Binet test (101a). This was in general use in this country for over twenty years. More recently, Terman and Merrill have improved upon the standardization of the test and have changed it in many particulars (102). This is called the Revised Stanford-Binet test.

Something over 3,000 children from 11 different states were examined during the 10 years required for the standardization of the new revised test. The test now provides for an age range of from *two years* through *superior adult.* By passing the Superior Adult III level it is possible to secure a mental age of 22 years, 10 months. The extension of the scale down into the lower age range has increased its usefulness materially. The results of the older Stanford Revision are said by the authors to correlate about .85 to .88 with the results obtained by the use of the newer test.

It seems hardly necessary to list other individual intelligence tests. Those interested would do well to refer to 12, 23, 27, 55, 77, 96 at the end of this chapter.

Group Tests

Group tests are those so set up that they may be administered to a number of individuals at the same time. The purpose is just the same as in the case of individual tests—namely, to obtain measures *upon individuals.* Obviously we can *also* learn about the group, e.g., the range of intelligence from the lowest to the highest, the average of the group, and the like. The safeguards mentioned above cannot be so well observed in group testing as in individual testing. For this reason it is possible for a child, through mischievous intention, failure to hear, or other reasons, to do *less well* on a group test than he is actually capable of doing. Unless cheating occurs, there is no way by which he can do *better* than he is capable of doing. Many of the references already cited give correlations between group test results and individual test results.

Group tests are usually linguistic or verbal in nature. It is possible, however, to administer a group test through the use of pantomime, and require only manual performance. In such tests no language is used whatsoever. The Army Beta Test, which was used during the World War with illiterate soldiers, is an example of a group non-verbal test. For the most part, the group tests used with children in our schools, however, are verbal in nature.

Since the correlation between individual and group tests is not perfect, the question is sometimes asked whether a child *always* scores higher on one than the other. The question is probably motivated by the fact that social workers sometimes get school reports indicating a group test I.Q. which is considerably higher (or lower) than an individual test I.Q. reported for the same child. It cannot be said that either type of test always gives a higher or lower I.Q. Again, the caution should be noted that any report on a child's I.Q. should carry the identifying name of the test used.

Perhaps a good way to see the value of group tests is this: Suppose a school administers group tests to 100 fifth-grade children. When the scores of the individual children are arranged in order from high to low, the school has every reason to believe that it then knows the top third, the middle third, and the low third of the children in respect to intelligence as measured by that particular test. School administrators can then plan class sections and instruction accordingly. Furthermore, the top 15 per cent, let us say, might also be selected and sent to the school psychologist for individual examining in order to determine the degree of their superiority and to arrange for appropriate instruction. Similarly, the lowest 10 or 15 per cent might be given individual examinations in order to verify group test diagnosis and to plan for appropriate instruction.

The administering of group tests does not require the technical training demanded in individual testing. For this reason, assuming proper familiarity with the directions and instructions, classroom teachers can safely administer group tests.

For lists of group tests, the grades and ages for which they are appropriate, the time required for administering, and the like, reference may be made to (55) and (77).

Performance Tests

For various reasons we need also to have tests which require little or no language and which give the examinee an opportunity to demonstrate phases of intelligence not represented in speech situations. Children with a language or hearing handicap or children with a discrepancy between ability in abstract intelligence and what may be called mechanical intelligence are best examined by the use of *performance tests.* Some performance tests are *verbal* so far as *directions* are concerned. Some, however, are entirely *non-verbal.* Louttit (55) and Pintner (77) may be consulted for lists and descriptions of such tests. These tests include *formboards, picture completions, construction puzzles, pegboards, block designs, cube tapping imitation, drawing a man, slot-maze,* and the like. The result obtained by the use of performance tests is usually designated as *Porteus Mental Age,* or *Wallin Pegboard Mental Age,* or *Grace Arthur Performance Test Mental Age,* and so on.

Let us take one example of the use of performance tests. Suppose a 15-year-old boy in the fifth grade is being considered for transfer to a prevocational school (9). Suppose his mental age on the New Stanford Binet is 9 years. Suppose his mental age on one performance test is 10 years, on another is 8 years, and on another is 9½ years. It would look, then, as though this child is no more promising material for manual training than for regular academic work *if vocational training* is intended. If, on the other hand, a change of interest and improvement of morale can be brought about by being "promoted" to prevocational school, then the venture would seem justifiable.

Aptitude Tests

Sometimes it is advisable to determine beforehand whether an individual is so endowed that it is wise for him to undertake certain training—music, for instance. *Aptitude tests* attempt to measure a person's ability in the different phases of the contemplated endeavor before training. The *Seashore Musical Talent Test,* for example, tests pitch discrimination, intensity, time consonance, tonal memory, and rhythm. These are essentials of music, and without ability in them one should not spend time in attempting musical training. The references cited above as well as (8) list many aptitude tests in art, mechanics, music, and the professions.

Achievement Tests

Aptitude implies *potential ability* without training; achievement implies actual *accomplishment* with or without training. For the most part, achievement tests are those which measure accomplishment in school subject matter. A child, by the use of an achievement test, may be found to have a *Reading Age* of seven; or a *Spelling Age* of ten; or an *Arithmetic Age* of fourteen.

Accomplishment Quotient

Obviously what a child accomplishes in subject matter is a function not only of the training to which he has been exposed but also of his own intellectual endowment. For this reason it would not be fair to expect the same Reading Age, for example, of two second-grade children if one had a Binet Mental Age of six years and the other a Binet Mental Age of nine years. In order to hold each child responsible for his own capacities and for only that, the *Accomplishment Quotient* has been evolved.

Suppose each of these children was given both a Stanford-Binet Test and a Reading Test on the same day. Suppose the first child with a mental age of six proved to have a reading age of six also. His Accomplishment Quotient, then, is his Reading Age divided by his Mental Age (six divided by six) and his Accomplishment Quotient is therefore 100. (Actually, of course, it is unity or 100 per cent, but it is usually called 100.) In other words, even though he is reading only as well as six-year-olds, it is all we have a right to expect of him since he is operating at 100 per cent of his own capacity. Let us suppose that the other child, with a Binet Mental Age of nine, has a reading age of eight and one-half years. He is obviously doing much better in reading than the first child. However, when tried out against his own possibilities, we find that his Accomplishment Quotient (eight and one-half divided by nine) is only 94. In other words, his accomplishment is perhaps a trifle less than it might be. The formula is usually written A. Q. = Ed. A, divided by M. A.; or $\text{A. Q.} = \frac{\text{Ed. A.}}{\text{M. A.}}\cdot$ When the educational achievement test and the intelligence test have been administered to the child on the same date, or approximately the same date, then the above formula is used. It sometimes happens, however, that a considerable time may elapse between these two tests for a particular child. In such a case, the Ed. Q. (Educational Quotient) is found first—Ed. A. divided by C. A. Following this, the A. Q. may be found by dividing E. Q. by I. Q. In other words, A. Q. $= \frac{\text{Ed. A.}}{\text{M. A.}}$, or $\frac{\text{Ed. Q.}}{\text{I. Q.}}$.

Within limits, the concept of the Accomplishment Quotient has great value. Perhaps, however, we have no right to expect that every child should show an Accomplishment Quotient of 100 in all subject matter. Maybe a very brilliant child really does not need the achievement in spelling represented by an Accomplishment Quotient of 100. Likewise, perhaps a feeble-minded child, who is never going to make much use of reading as a tool, should not be held up to an Accomplishment Quotient of 100 in reading. Perhaps we *should* expect such performance from him, however, in habits of neatness, of honesty, and of recreational skills—if we had measures for such things (18, 22, 25, 32).

Tests of Social Competence and Maturity

In social work, occasionally, the disposition of certain unusual cases demands an inventory of a nature not entirely covered by intelligence tests. For example, a girl, examined recently by the author, has an intelligence quotient of 94 and yet is the mother of five illegitimate children of four different fathers. Another unmarried mother with an I.Q. of 80 said to the writer, "I know I won't ever have any more babies 'till I'm married unless I can't protect myself on account of this arm" (an arm with old scar tissue from a bad burn). To *avoid situations* in which she might *have* to protect herself never seemed to occur to her. On the other hand, there comes to mind a case of a feeble-minded (I.Q. 70) widow, mother of five small children. After the death of the husband there *was* a question as to whether she was using a great deal of alcohol and entertaining undesirable company. After she and the family were moved to a different community where a sister could give a little supervision occasionally, however, there still was a question in the mind of the social agency whether this mother should be allowed to maintain a home and keep her children. When the mother and her brood trooped into the psychological clinic, a picture of greater immaculateness, composure, and fine spirit would be hard to imagine. The mother had made practically every garment the children were wearing, from discarded clothes given her by friends and neighbors. In spite of fairly low-grade intelligence, the mother undoubtedly had a degree of social competence and self-sufficiency.

Measures of social competence to supplement intelligence-test results, social histories, and medical histories have been sorely needed. (109). Doll (22) has devised such a test which fills a long-felt need. The author has been using this scale with clients and checking with the social worker on the case. The questions asked of and about the client are of great interest to the social worker in working out techniques to be used with the particular client. It is the writer's hope that eventually greater coöperative use will be made of the scale by clinical psychologists and social workers. The range of possible *social ages* is birth through 25 years.

The Feeble-Minded

Although we have already stressed the fact that differences between defective, average, and superior intelligence are matters of degree, perhaps the idea will bear repeating. To many people, feeble-minded individuals seem to belong to a different species, to be totally unlike the rest of mankind. *One common confusion* is on the question as to whether or not feeble-minded individuals can be identified by appearance. The answer here is that in the majority of cases the feeble-minded cannot be distinguished by appearance alone. Obvious exceptions, of course, are idiots who cannot even speak; some low-grade imbeciles; and cretins and mongoloids, to be discussed below. *A second question* is implied in our previous discussion as to individual differences among mentally deficient persons. No, they are not all delinquent; they are not all unusually strong; they do not all have violent tempers, nor are they all very mild-tempered; they do not all die young; and they do not all deteriorate and become mere vegetative creatures—in fact, few do. *A third fallacy* is that all feeble-minded persons become social problems either because of delinquency or dependency (5, 69). Many individuals of all grades of defectiveness have not run afoul of either the law or the *mores* of their communities. As for economic independence, *under favorable circumstances* some imbeciles and many, many morons have been able to support themselves. *A fourth misunderstanding* has to do with academic progress. "Will this child never be able to go to school? Will he never be able to learn?" Perhaps it is safe to say that any grade of intelligence can learn *some* things. Even the idiot may learn to recognize his caretaker. Idiots, however, can never learn any of the things that are taught in public schools, nor, indeed, would they even be able to get there alone. Otherwise we may say that an individual is able to learn at about the level of difficulty indicated by his *mental age.* In this connection, however, we must remember that mental age does keep on increasing in amount over an indefinite period of time. There comes a time, therefore, when the feeble-minded person cannot learn any more difficult steps of academic material and has come to a standstill so far as increase of mental age is concerned. By this time, of course, he is chronologically so much older than normal children able to learn at that level of difficulty that he is out of place socially, emotionally, and in terms of life experiences in the ordinary school.

Professional workers often see mental defectives who are easily noticeable because of their thick-set bodies and short bowed legs. They are dwarfed in height but often have large amounts of subcutaneous fat and large abdomens. The tongue and lips are often thickened, and the hair may be brittle and scant. These are *cretins,* and the amount of their mental defectiveness correlates highly with the number and amount of their physical defects. The condition is definitely known to be caused by hypothyroidism. In some cases, the lack of thyroxin occurs in both the mother before the birth of the child and in the child itself. This is true cretinism. In other cases, the child *in utero* may have received sufficient thyroxin from the mother, but after birth be unable to supply himself with sufficient to insure adequate development. This condition is known as *infantile myxedema.* These cases are often much benefited physically by medically prescribed thyroid extract. The amount of benefit to be derived for development of intelligence seems to depend in large measure upon early diagnosis and treatment and is not always so great as we would wish.

Mongols, Mongolian imbeciles, or *Mongoloids,* as they are variously called, form another type of feeble-minded who are easily recognized. For the most part, they look so much alike that we are likely to mistake one Mongolian for another. The significance of the name lies in the fact that they do resemble Orientals (Mongolians), especially in and around the eyes. The eyes are set in widely separated and shallow sockets, are almond-shaped, and often have puffy eyelids. The bridge of the nose is usually flattened, and the hair is scanty and dry. The tongue is usually large and very frequently (in fact, usually) is transversely fissured. The lips are often fissured also, and the mouth is likely to be open with the tongue somewhat protruded. The muscles and joints are loosely geared, so to speak, and the Mongoloid child often sits tailor-fashion and assumes positions resembling those of double-jointed people. The cause of Mongolism is definitely not heredity, but beyond that little is known. Recent evidence, however, indicates that some pathology in the mother during pregnancy is responsible. These uterine conditions may be similar to those found in an exhausted uterus after a long period of child-bearing or in relatively older mothers (which conditions were formerly thought to be associated with production of Mongolism). For reasons not easy to understand, Mongols and cretins are sometimes confused and, as a result, Mongols are often treated with thyroid, under which treatment they show no improvement but may show considerable excitability and restlessness. Mongoloids vary in intelligence, and here again the degree of mental defect seems to correspond closely to the degree of physical defect (44, 101, 113).

Occasionally one sees children with abnormally large heads (*macrocephalics*) caused by a brain that has been enlarged by the presence of excessive glia, or supporting cells, which have nothing to do with active nerve cells necessary for intelligence. The skull of the macrocephalic is abnormally large, as is also the face.

Hydrocephalic heads are those enlarged by an excessive amount of cerebro-spinal fluid ("water on the brain"), causing bulging at the fontanelles, sutures, and temples. The size of the face is not changed.

The degree of mental retardation in all the above cases depends, of course, upon etiological factors and degree of the brain abnormality.

Microcephalics are those individuals with abnormally small heads and brains. The head is long and narrow and is rarely over 17 inches in its greatest circumference. The condition originates in utero and often the cause is not known. Some cases apparently, however, are caused by pelvic irradiation of the mother before the birth of the child.

Causes of feeble-mindedness have been mentioned at different points throughout this text. Perhaps it will suffice to repeat here that by far the largest percentage of cases rest on a genetic or hereditary basis (52, 76, 117). Uterine anomalies and birth injuries furnish still other cases. Recently the geneticists (16, 91) have been concerned over the high percentage of feeble-minded children born to mothers where there is a discrepancy between mother and child in the Rh blood factor. It is possible that this may be the explanation of some hitherto unexplained cases of sporadic feeble-mindedness in otherwise normal families.

Inasmuch as several semester courses would be needed to give an adequate knowledge of feeble-mindedness, we shall close the theoretical discussion at this point and suggest that the reader do further study by means of references: 19, 29, 33, 36, 75, 82, 110.

Two of the main problems which social workers meet, when dealing with feeble-minded children, are school adjustment and questions of institutionalization. The first of these questions we shall discuss in a subsequent chapter. When to resort to institutionalization for feeble-minded children is a question of prime importance. In considering this question, it is important to remember that the range of individual differences is practically as great among the feeble-minded as among the normal (57, 58, 59, 60, 62, 63, 115). That means, then, that some feeble-minded have violent tempers, some do not; some are highly sexed, some are not; some are docile, some are not. As a class, they differ from normals most particularly in amount of intelligence. Let us suppose that we have among our clients an eight-year-old, very feeble-minded boy. Let us suppose that the parents are living and well and that there are an older brother and sister who are normal and who are devoted to the child. Let us suppose, further, that the child is docile, happy, able to be around the house, and has never gotten into trouble with the neighbors. Should this child be institutionalized? So long as the family is able and glad to care for him, so long as he is cared for without too much sacrifice of the normal members of the family, and so long as he gives no evidence of being or becoming a social problem, perhaps we had better leave our crowded state institutions out of consideration. Where a feeble-minded child has already given evidence of gross social maladjustment, where he requires so much care that the health and happiness of the family are endangered, where in all probability there will be no one in the family to look after him on the death of his parents, where the parents are futilely spending money upon him that is needed for the normal children in the family, the case is very different (46, 112). Some questions to consider are: whether or not custodial care is necessary; whether the family can provide long-time care without unduly penalizing its normal members; and whether society is being endangered (42, 84).

Another method of caring for the feeble-minded is a kind of parole system in private families. It is claimed that such a plan gives a more normal type of life for the feeble-minded and is cheaper for society. References 46 and 112, to mention only two, discuss this problem.

The problems which the teacher has with the feeble-minded are largely those of learning and discipline. Fortunately, most school systems of any size provide special class instruction for feeble-minded children. Rural children, as a rule, do not have such advantages.

The methods of admission to special classes, or *opportunity rooms* as they are often called, vary from one school system to another (9, 43, 63, 70). Likewise, the qualifications of *orthogenic teachers* and the nature of the curriculum differ from one state to another. The field is so large that it cannot be discussed in detail here. Any teacher who is interested in this field would do well to read the following references: 24, 40, 43, 57, 58, 62, 63, 70, 86, 110, 114, 115. In passing, it might be well to note a few essential points, however. Much of the success of opportunity rooms depends upon the acceptance built up in the community and among the parents and children. Sometimes this is made difficult if children grossly deformed or afflicted with seizures and fits are enrolled in the class. The name chosen for the class is of importance, likewise. Some cities do not place a child in such a class until either the school psychologist or the visiting teacher has made enough visits to the home to insure home and school coöperation on such a placement. (See Chapter 13.)

Children of Dull Normal and Borderline Intelligence

In some respects children of borderline or dull intelligence constitute more of a problem than feeble-minded children. They are intelligent enough to get into difficulty, but not deficient enough to be spotted as such or to be institutionalized. Delinquency studies such as (77) show that a large percentage of delinquents come from the intelligence quotient range of 70 to 90.

Academically, also, these children constitute a problem. The curriculum of the school is not geared to their ability; yet they do not belong in the special classes for the feeble-minded. Revision of the curriculum for this group is urgently needed. Incidentally, it is this group, rather than the superior group, which is likely to suffer from being "pushed" in school. The brilliant child is less likely to be forced beyond his limit than is the borderline child.

Occasionally one finds a borderline child in a family of feeble-minded. In such cases the borderline child shines with a spurious light. The writer was recently asked by the administrator of a "children's home" to examine a "very bright boy" whom the administrator wished to have continue school with the idea of making a scientifically trained farmer out of him. The report went on to say, "If time permits you might question him on the Bible—merely to see how much teaching he has absorbed from one Bible lesson each Sabbath." The boy, it developed, had *very* average intelligence (I.Q. could not be definitely determined since there was a question about his actual age).

So far as the boy knew, all his people had been miners and there was no rural life in his background. He frankly disavowed any interest in farming and said he greatly preferred mechanical work. The difficulty seemed to have come about from the fact that, *in comparison with other children in the institution,* the boy appeared brighter than he actually was and the school he had been attending *did* offer scientific agriculture.

Social justice miscarries likewise when children of borderline intelligence, or dull children, are placed in foster homes where other members of the foster home are able to have living standards set by average or better-than-average intelligence. Ordinarily we do not think of using our rather scarce, good foster homes for feeble-minded children. Borderline children are often so placed, however, to the great discomfort of both the child and the foster family. Other things being equal, such a child would be infinitely happier in a home where other members of the family were not too superior to himself.

Gifted Children

It used to be said that the public school was a "place where pebbles are polished and diamonds are dimmed." This accusation is less true than formerly, since many city schools are making provisions for appropriate education of superior children. It is now generally conceded that rapid advancement to the point of getting a child's social development out of gear is bad. A better solution seems to be a combination of *rapid advancement* (the work of skipped grades must, of course, be mastered) and *enriched curriculum* within the grades. Another solution is *segregated classes for the gifted* where they take up subject matter that is taught nowhere else in school. This, of course, is in addition to their regular academic work. The latter plan, it is claimed, prevents conceit, inasmuch as superior children must thereby compete against their peers and have to *work* to do it (7, 11, 15, 17, 20, 34, 38, 39, 40, 48, 54, 60, 61, 70, 73, 74, 85, 103, 115).

Other Considerations of Intelligence Testing

Our chief concern, of course, is the child in the family. It sometimes follows that the *child's* best interests are conserved by having his *parents* tested. A social work summary submitted to the author recently gave as the "reason for referral" the following:

> We desire to know whether it is wise to spend any more of our efforts in trying to rehabilitate this home. The mother seems either unable or un-

willing to coöperate. She will not even keep clinic appointments at the hospital where her children are supposed to be receiving treatment.

Examination of this mother disclosed that she had a mental age of seven years and three months; a social age of eight years; did not know how many days there are in a week; did not know which month comes after January; could not tell time to the quarter hour; and failed utterly to arrange in order boxes weighing 6, 9, 12, 15, and 18 grams. Is it any wonder the mother did not, or could not, keep appointments and otherwise coöperate? By a curious twist of fate, her children not only had higher I.Q.'s than she had, but three of them actually had higher mental ages than their mother.

Another question that is often discussed is whether the I.Q. of a child should be reported to him, to his parents, or even to his teachers. There is no one answer to this question. The child's age, intelligence, and emotional make-up would seem to determine whether or not *he* would make good use of the information. A bright child might be stimulated by knowing his rating, whereas a dull child, if he understood what it meant at all, might be depressed and paralyzed. The intelligence of the parents likewise needs to be considered before deciding whether to tell them the I.Q. of their child. If the parents are intelligent and have an intelligent child for whom they should plan properly, probably they should be told. Likewise, if such parents are unfortunate enough to have a defective child, they should perhaps know of his defect, if not of its degree. Unintelligent parents need not be told, for they would not understand. There have been schools that were almost ruined because teachers were told the I.Q.'s of their pupils. The writer has heard of (but has never known) teachers who had each child's I.Q. on a sticker pasted on the back of his seat; or who had each child put his I.Q. after his name on the heading of his paper. It would seem almost axiomatic today, however, that if a teacher has training enough to be teaching, she has training enough to know how to use such information. In all cases, however, the ultimate answer depends upon the amount of educational publicity which has been given in a particular community to the whole matter of testing, and upon how intelligently the concept has been developed.

Psychological Clinics and Social Workers

Because of the increasing interaction between clinical psychologists and social workers, the National Conference on Social Work has for a number of years been having section meetings on clinical psychology.

It has also had on exhibit specimens of the psychological reports sent to social work agencies by clinical psychologists. Social workers themselves are beginning to study and evaluate these relationships. For this reason it is hoped that social workers will read the following references: 1, 32, 41, 56, 79, 83, 84, 94. This interaction between the two disciplines should be mutually beneficial. It might, among other things, show to psychologists the futility and inadvisability of including in clinical reports to social agencies results on tests the meaning and significance of which are not apparent or helpful to the agency. The writer once saw such a report which included a statement of the child's performance on "Minkus Completion." Since this test was not known to the social worker, the significance of the statement to her was exactly nil.

Perhaps it might be well at this point to call attention to the fact that our present chapter has confined itself almost entirely to a consideration of *intelligence,* and has not been a discussion of *clinical psychology*. The clinical psychologist has much occasion to study intelligence, administer intelligence tests, and explain intellectual differences to teachers and parents. It is to be understood, however, that administering intelligence tests is by no means a complete log of a clinical psychologist's day's work or his only means of studying a client. Perhaps the discussion in the chapter on Emotions will amplify this statement.

What Is Average Intelligence?

In conclusion, it may be said that probably those who have read this discussion, or who read any treatise on intelligence, really do not know what *average* intelligence is, for the simple reason that they are above average themselves. We tend to lose sight of this fact. High school graduates are above average; college graduates are above average; and persons who study abstract questions such as "intelligence" are above average. Keeping this thought in mind may cause us to be somewhat more lenient with those who "do not seem to understand" and may also cause us to question our own "accomplishment quotient."

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CHAPTER XIII

THE CHILD AND HIS SCHOOL

The Social Worker's Contact with the School

It is unfortunate that a large part of the social worker's contact with the school has to do with only the *seamy side* of our educational endeavors. Of the something over 1,000,000 public school teachers in this country, a large number of the very best, social workers never see. Of the approximately 35,000,000 school children, social workers are likely to see only the ones that do not adjust to the school system. These facts, as well as certain other criticisms of the public schools, should be evaluated by the use of a true, not a distorted lens. For example, it is sometimes remarked that all, or nearly all, the prisoners in our workhouses and penitentiaries were at some time in their lives pupils in our schools, where education had a chance at them. Someone *did* fail on these unfortunate misfits, it is true. Before blaming the schools entirely, however, we need to know certain other pertinent facts about the lives of these individuals. Let us keep in mind also that Banting, Millikan, Einstein, Thorndike, Whitehead, Santayana, Freud, Eddington, Bertrand Russell, H. G. Wells, Alexis Carrel, and many others *also* attended our schools. It would be a fine thing if there were some way of discovering how much, other than factual information, the schools contributed to the training of *these* men.

Criticisms of Teachers

While those of us who are in the teaching profession do not care to accept any unwarranted criticisms against us and our work, yet surely we are mature enough to face the facts. For the past few years there has been a barrage of unfavorable comment that we must examine. Townsend (134), for example, says[1]:

> The popular notion is that the teacher is a cross-grained, irritable, ill-humored termagant, quick to take offense, isolated, aloof, unsympathetic alike

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[1] From M. E. Townsend's "Mental Hygiene and Teacher Recruiting," by permission of *Mental Hygiene.*

to child and to parent or patron, given to temper outbursts, and relying upon his or her authority to gain ascendency over children whom he despises and in whose life he has no abiding interest.

Most teachers would deny that that is a *true* picture of themselves and their colleagues, but perhaps would not deny that it *is* the picture we have somehow allowed people to form of us. Townsend goes on to cite studies which show that in cities the chances are seven to one that in twelve years of public school education a child will have at least *two* maladjusted teachers. Boynton (16) shows that, after only two or two and one-half months of association between teacher and pupil, children show the emotional effects of their contacts with their teachers—good, if the teacher is well adjusted; unfavorable, if the teacher is poorly adjusted. See references 33, 71, 141, and 153.

Mental Health of Teachers

In the *Mental Health of Teachers,* Hicks (56) reports on the mental health of 600 teachers in service. It was estimated that something over a third of them were unusually stable and well balanced (the majority of these, incidentally, had a *hobby* of some sort); about a third could be rated average in stability and adjustment; and the remainder were unusually nervous. Approximately 11 per cent had had a nervous breakdown, and a considerable number had at one time or other contemplated suicide. Peck's study (89) of the adjustment of 100 women teachers gives about the same picture. Nearly one-third of these teachers felt themselves deserving of a better lot in life; one-fifth were frequently in low spirits; one-fourth often found themselves in a great state of excitement; one-third were nervous; one-sixth lost their tempers easily; one-fifth were tired most of the time. Several other neurotic traits were listed. Peck concluded that one-third of these teachers were definitely maladjusted; one-sixth badly enough so as to need psychiatric treatment.

In 1931, Mason (71) studied the cases of 190 men and 543 women teachers who were patients in four hospitals for the insane in the vicinity of New York City. They had been at one time primary, high school, and college teachers, and even college deans. Teaching, as such, did not appear to have produced the mental disturbance of these teachers; in fact, heredity seemed to have played a larger role. One of the interesting things about the study, however, is the comparison of these teachers with other inmates from other walks of life. One point of comparison was that the age on entering the hospital was younger for the teaching group. Another was that the teachers had more *paranoia* (a systematized delusion usually involving ideas of being persecuted); their speech was more apt to be fast. They may have thought they would thus be considered more alert. Only 3.7 per cent of the men were interested in sport, dancing, theater, music, or travel. Only 13.5 per cent of the women were so interested. If such delusions and avocational lacks were evident while these teachers were still in service, one fears to speculate about the effects upon their pupils if, as Boynton contends, the emotional state of the teacher affects the pupil after a very short period of association.

Those interested in following such studies further should read the following references: 3, 16, 25, 37, 56, 57, 71, 89, 91, 103, 134, 139, 141, 153. In this connection also, it is interesting to notice that the Fifteenth Yearbook of the Department of Elementary School Principals (33), *Personality Adjustment of the Elementary School Child,* devotes 74 pages (Chapter IV) out of 273 pages to *teacher* personality and its effect upon children.

The 1938 Yearbook of the Department of Classroom Teachers (31) is entitled *Fit to Teach.* Any one of the newer books on mental hygiene may be consulted for other descriptions of teachers' personalities. A. S. Neill goes so far as to write a book called *The Problem Teacher* (84). Symonds has applied one of the newer analytical techniques to a study of the personality of teachers. This is done by means of analysis of autobiographies. By this means Symonds attempted to determine the felt needs expressed or implied by a group of teachers in their autobiographies (121).

We are coming to realize also that pupil reactions to and evaluation of teachers are often very revealing and highly diagnostic. Without too exhaustive study the writer has run down fifteen articles in the professional writings on this subject and written within twelve years or so, not all of which are listed here (15, 17, 18, 19, 20, 21, 130, 142). No doubt, more could be found and, if constructively handled, valuable research might be made along this line. Bain (6) gives parents' reactions to teachers.

Lest anyone think that emotional maladjustments are confined to the teaching profession, let it be known that recently 46 per cent of a senior class in a medical school were found to have "neurotic handicaps of a serious nature."

Teacher Training

It appears from the literature that the mental health of teachers, as a class, is a thing which should be looked into. Their hereditary background, their interest in things outside the classroom, their interest in children as children, and their philosophies of life are of utmost importance. For this reason it is becoming more and more apparent that very careful selection of teaching candidates must be made (3, 25, 37, 151). Townsend (134) says, "Teaching is apparently looked upon pretty generally as a right, not a privilege." Teacher-training institutions are beginning now, however, to attempt a careful check-up and follow-up on their teaching candidates.

In the past, the *training given to teachers* was altogether too much concerned with subject matter and method and too little with the principles of mental hygiene and of child psychology. Teacher-training institutions are struggling with the problem as to how we should give preparation in the latter fields. The professionally trained visiting teacher and school social worker, of whom we shall speak later, is more fortunate in her training in this respect, as a rule, than the large majority of classroom teachers of today.

A student of the writer once asked if the time would not come when boards of education would employ two people for each classroom—one to do the teaching and the other especially trained to attend to the personality problems of children. The reply was to the effect that such a scheme would be undesirable in the extreme. The hope should be that eventually we should have sufficient numbers of teachers adequately trained so that each teacher will have the time and ability to look after the personality problems of her pupils herself.

It would appear that teaching, like social work, clinical psychology, and perhaps the ministry, has not as yet devised adequate screening processes by which to eliminate from the privilege of professional training those emotionally and socially unfit to do the personal and relational kind of work required in these fields. Candidates may pass creditable examinations and may even run the gamut of "faculty interview" and yet later display personal qualities entirely inappropriate for this chosen work. The increasing use of some of the projective techniques described in our chapter on Emotions promises much in the way of giving real insight into the personality of prospective teachers.

Factors Operating in the Lives of Teachers

We appear to be doing here what physicians are too often called upon to do; that is, to find out the cause after the malady has already developed. If it is true that many teachers do not have dispositions and personalities that are kindly, sympathetic, outgoing, cheerful, pleasant, and fair, what are some of the etiological factors? Rivlin

(104) says, "Wholesome personality is not attained by worrying about it or by excessive self-analysis." Perhaps teachers can be helped by being shown some of the factors that analysis of other teachers' lives has revealed (22, 25, 37, 50, 56, 58, 88, 91, 103, 104, 107, 112, 152, 153).

Vocational psychology has shown us that we must know not only the types of personality which do best in certain professions, but also what the chosen profession does to the personality. This involved question is of great significance in regard to teaching. Do personalities desiring *power and authority* over others go into teaching in the first place, or does teaching make people "get that way" (50)? No doubt, in some cases the matter works both ways. Unquestionably, as the studies of teachers' mental hygiene have revealed, all too many teachers "stay back of the desk," issue orders which they expect to have obeyed, and generally assume the position of the omnipotent so far as the classroom is concerned. It is only fair to say, of course, that the nature of the profession is *partly* responsible for this condition. Dealing with less mature minds may have a tendency to make one more authoritarian than he would otherwise be.

Like all human beings, teachers necessarily have personal problems and worries of their own. There may be, besides, problems that are rather more common in teaching than in other fields. The necessary clerical work, preparation for the next day's teaching, and required professional reading and study limit the opportunity for outside social contacts. A schoolteacher friend of the writer once chose a somewhat unattractive boarding house for the reason that *men* with whom she could talk boarded there. She did not want to "talk shop" at the table as well as all the rest of the day. One can but admire her good judgment.

During a recent university summer term a teacher from a distant state remarked to the writer that she had been under considerable strain during the current year caused by heavy school work and two deaths in her immediate family within a period of ten months. Her remark was: "I would be a much better teacher next fall if I could rest this summer and get back on my feet. The school authorities say, however, that I must take six university credits this summer." All of which seems rather paradoxical in the light of what we know of good physical and good mental hygiene.

Many a young college graduate goes into teaching feeling deep down within her that it "will be for only a few years," fully expecting to marry "someday." After a few years of teaching, she may find that her gay, collegiate social life is gone and nothing has come to take its place. This realization and the attendant adjustment, which may require several years thereafter, are most critical. Outlook on life, interest in people and things, skills for enjoyment may require the utmost care if mental health is to be preserved.

Some communities, particularly in the past, have made life difficult for teachers. The teacher was expected to *make her life conform to the standards of the community* in which she taught. Within limits, of course, acceptance of community standards is desirable, if it does not in the process sap out one's life blood and one's personality. As Rivlin says (104), we must not make a "teacher live in a showcase twenty-four hours a day." To smoke or not to smoke, to bob one's hair or not to bob one's hair, to marry or not to marry, should be the individual prerogative of teachers as of anyone else.

Salaries for teachers, considering the amount they must have invested in themselves, have been low. For this reason and sometimes for others, living conditions and accommodations which teachers must often accept are not such as would make one eager to face the new day or eager to go "home" at night. Salaries must often be budgeted, too, so as to provide for more "professional training." It would appear that professional training is good if it makes one both a better-trained professional person *and* a more wholesomely happy person. There may (and, indeed, there is no question but that there are) be instances in which it fails to do the latter.

Before criticizing a teacher too severely, however, we should know the policies and conditions within the particular school where she is teaching. In many schools, even yet, a teacher's likelihood of promotion or of an increase in salary depends in a large measure upon her ability to "keep order." A teacher of English in a large high school once had a theme handed in to her which she considered *real literature*—even though it was humorous! As is customary in English classes, she had some themes read aloud, including this one. The children *enjoyed* the theme, which might be considered a legitimate desideratum in teaching English. In the midst of their laughter the superintendent of schools walked into the room. The methods he used to "restore order" and the things he said to the teacher in the presence of the pupils need not be gone into here! One can only agree with Sir John Lubbock, who once said, "I cannot think but that the world would be better and brighter if our teachers would dwell on the *Duty of Happiness* as well as on the *Happiness of Duty*."

Teachers' Reactions to Problem Behavior

In previous times some teachers had lists of children's "offenses" and for each offense there was supposed to be an appropriate "punishment." It is to be hoped that such thinking has long been outmoded. Nevertheless it is necessary, from the standpoint of both prevention and cure, to know what the problems *are* which teachers most frequently encounter in working with children. On this matter, there is a classical study which must be considered somewhat in detail. This is Wickman's *Children's Behavior and Teachers' Attitudes* (145). More recently Wickman has abridged the original volume and published a digest (146) which should be in every school. The major contribution of Wickman's study was an unexpected outgrowth of the original problem. The initial plan had been to get information from teachers on the incidence of behavior problems in elementary schools. The teachers in a large elementary school in Minneapolis and one in Cleveland were therefore asked to list all kinds of problems of behavior which they had encountered in their teaching experience, to check the frequency of the problems for each of their pupils, and to rate the total behavior of each child. For comparison, similar data were also secured from "the entire teaching staffs of thirteen representative schools in six communities, from two groups of experienced teachers enrolled in advanced courses in two colleges of education, and from the staff of one progressive school for boys." (145)[2] The results from all these sources agree essentially.

What is problem behavior? Wickman's first discovery, on compiling the responses of the teachers, confirmed Shakespeare's statement that "there is nothing either good or bad, but thinking makes it so." In other words, each teacher, more or less, had her own idea of what problem behavior is. This was so true that one can get a fair notion of the personality of some of the individual teachers from the lists of "problems" they submitted to Wickman. For example, one teacher gave as the first 5 out of her list of 13 common behavior problems, "determination to have own way, contrariness, antagonistic attitude toward teacher and others in authority, disobedience, stubbornness." It evidently did not occur to this teacher that she was saying the same thing five different ways and that maybe *her inflexibility* was the cause of it all anyway. Another sample given by Wickman is a list of 53 problems of behavior encountered by another teacher. The list ends with "those who will not sit still at least two minutes." Did that teacher get on the children's nerves, did they get on her nerves, or both? A third teacher had encountered 29 problems of behavior, including "not putting pens down when told in writing lesson, raising hands when standing, standing on wrong side of seat when ready to answer, snickering, in a music lesson to hum or sing aloud when asked to study, and erasing board when asked to leave work there." This teacher seemed surprised, too, that her children "asked to leave the room when not necessary"!

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[2] All quotations and tables from Wickman's *Children's Behavior and Teachers' Attitudes* are made with permission of the author and the Commonwealth Fund, publishers.

The first conclusion from Wickman's study is that teachers have no commonly accepted list of behavior problems. The point is that whatever a particular teacher considers problem behavior *is* problem behavior in *her* room and is treated accordingly. Who cannot remember from his own school experience that putting the date on the *left* side of the heading of a paper and the grade on the *right* side was "problem behavior" in one room, judged by the fuss it caused, and that in the very next room, after promotion, "problem behavior" was exactly the opposite, and the whole process had to be learned over again.

Obviously this principle applies in fields outside of teaching. To one parent, staying out after nine o'clock is problem behavior; to another, it is not. To one parent, "shooting crap" is reprehensible; to another, it is not, and so on. When *we* consider that conduct is wrong in children, *we* try to stop it, or punish it, or cure it. Unfortunately for the child, home, school, and society do not always *agree* upon what is right for him to do any more than his teachers agree among themselves. As a result, the demands of adults must at times be most confusing to a child.

Teachers' ideas of seriousness of problems. Wickman (145) goes on to say: "The findings suggest that teachers' reactions to the behavior problems of children are determined in direct relation to the immediate effect of the behavior upon the teachers themselves. Those problems which transgress the teachers' moral sensitivities and authority or which frustrate their immediate teaching purposes are regarded as relatively more serious than problems which affect for the most part only the welfare of the individual child." In other words, what might be called *attacking behavior* is considered by teachers to be very bad, while *withdrawing behavior* on the part of a child is regarded much less seriously.

Mental hygienists' ideas of seriousness of problems. The list of problems submitted by the teachers, and condensed to avoid duplication, was then submitted by Wickman to thirty psychiatrists, psychologists, and psychiatric social workers for evaluation. In the meantime, the teachers had also been asked to rate the problems in order of seriousness. It should be borne in mind that we are here comparing the "teachers' customary modes of response" with the mental hygienists' "intellectual judgments about the relative seriousness of the problems insofar as they may be indicative of maladjustment." The reversals between the teachers' evaluation and that of the mental hygienists are striking in the extreme. The following table shows the two sets of ratings as given in Wickman's recent digest of the original study (146).

TABLE XVI

JUDGMENTS OF TEACHERS AND OF MENTAL HYGIENISTS ON SERIOUSNESS OF BEHAVIOR PROBLEMS[3]

TEACHERS' OPINIONS			
Most serious			*Least serious*
Immoralities Dishonesties Transgressions against authority	Violations: Orderliness in classroom Application to school work	Extravagant, aggressive personality and behavior traits	Withdrawing, recessive personality and behavior traits
MENTAL HYGIENISTS' OPINIONS			
Most serious			*Least serious*
Withdrawing, recessive personality and behavior traits	Dishonesties Cruelty Temper trantums Truancy	Immoralities Violations of school work requirements Extravagant behavior traits	Transgressions against authority Violations of orderliness in class

Results of teachers' attitudes. The problems which annoy the teacher most are those which frustrate her plans and goals. They are called *attacking behavior* by Wickman. The teacher, in turn, reacts to the frustration which she thus experiences by "personal, emotional responses to children who exhibit problems in behavior." Her "response is in the nature of counter-attack." On the other hand, when a child displays timidity, suspicion, fear, or any type of *withdrawing behavior,* the teacher's "response is modified by the sympathy and protective feelings aroused by the dependency and inadequacy of the pupil. . . . By counter-attacking the attacking types of problems and by indulging the withdrawing types, the underlying difficulties of adjustment in each case are increased and the undesirable expressions of social behavior are further entrenched" (145). In other words, the aggressive child elicits aggressive behavior from the teacher, and each makes the other worse. On the other hand, the introverted or withdrawing child is let alone by the teacher, and thus his retreating behavior is intensified. The significance of these facts in regard to a child's school life is profound indeed. Wickman concludes that teachers need more knowledge as to what constitutes *normal child behavior,* and more knowledge of the fundamental principles of mental hygiene.

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[3] From Wickman's *Children's Behavior and Teachers' Attitudes,* by permission of the Commonwealth Fund, publishers.

In Chapter VII, mention was made of the studies by Stogdill of parents' attitudes toward children's behavior. The methodology used was essentially that of Wickman, and the results were essentially the same. Several other investigators have also used Wickman's technique. All in all, it appears that adults do not have a very adequate idea of normality of child behavior, and the child suffers in consequence whether it be at home or in school (90, 128, 129, 136, 140, 152).

Other Studies of Teachers' Knowledge of Mental Hygiene

Two other studies of significance must be referred to in this connection. Hobson (57) compiled a list of 42 principles of mental hygiene which he gathered from periodicals, texts, and opinions of experts. The list was presented to a cross section of teachers in rural schools, supervisors, and teachers-in-training. Hobson found that these teachers erred on about one out of five principles presented to them. The greatest percentage of error lay in the fields of "fear" and "relationships of children to adults." Some other errors might have been less serious, perhaps, but *these* are matters of such vital importance in the life of a child that adult ignorance here is not to be condoned. It is interesting to speculate upon the possible difference between recognition of mental hygiene principles on a paper-and-pencil test and of the same principles in actual classroom situations!

A somewhat different approach to the problem of teachers' adequacy in diagnosing and handling behavior problems was made by Campbell (22) in a study of 83 elementary schools in New Jersey. These schools had 2,763 children in grades one through six. In all, over 1,200 cases of problem behavior were studied. The teachers were asked to list the actual problems as they arose; to tell why they considered them problems; to tell what method of handling the situation they used; what result they expected to accomplish by the method; and whether they considered that the method had been successful. These questions would make a good breastplate for every teacher to bind to her body while dealing with children.

Cox and Anderson (26) used a mental-hygiene scale for teachers and studied student and teacher reports on techniques the teachers used in dealing with problem situations. The conclusions indicate that the teachers studied either used means entirely inappropriate to the individual problem situation or else dealt with it in such a way as to make the problem worse.

As in the other studies mentioned, overt actions that interfere with order were most frequently mentioned by these teachers as examples of problem behavior. As might be expected, *punishment* was the commonest method used in handling these situations, occurring three times as often as all other measures combined. Punishment included *censure,* which was the most frequent treatment for all types of problems. *Deprivation* ranked second, and *reward through social approval* ranked seventh. What is of great significance is the fact that the teachers' practice was to use the *same treatments for all classroom behavior problems,* whatever the nature or cause. There was no evidence that the teachers took into account the motives or the environmental factors involved in each case of behavior difficulty. The methods used by the teachers were evidently for the sole purpose of removing the disorder and, interestingly enough, the teachers expressed a high degree of satisfaction with the success of their methods.

While the results of the study just mentioned are the trends and general averages found in the study, it is only fair to say that there were differences found between the practices of teachers rated superior and those rated mediocre. The expert teachers expressed less confidence in the success of punishment and used relatively fewer punishments and more rewards than the less successful teachers.

Other studies of teachers' attitudes toward problems of behavior may be found in the following references: 7, 22, 33, 70, 90, 106, 110, 115, 129, 136, 140.

The picture given of teachers' lack of skill and finesse in interpreting and redirecting conduct is disheartening. Nothing should allow us to close our eyes to the facts. Our teacher-training institutions must certainly improve their methods of selecting candidates for admission. Further, they must develop more practical curricula with appropriate practice work in the realm of mental hygiene and disorders of conduct. Boards of education will have to see to it that teachers in service are kept functionally cognizant of modern principles of child treatment. They will have to remove from service, drastic as it may seem, every teacher whose own mental hygiene, through either ignorance or conflict, fails to function on a high level in dealing with children (33). Boards of education will have to go one step further—namely, to devise suitable ways of evaluating *real* teaching, and then to promote or otherwise advance those supervisors, principals, and teachers who are really trying to teach *children* rather than subject matter. Fortunately, the United States has many such teachers (134).

Visiting Teachers or School Social Workers

One of the most significant changes taking place in our school systems within the last few years is the employment of visiting teachers or school social workers. Technically, these names apply to a specially trained group of persons with preparation in both education and social work. Currently, there is a shift of emphasis in training. In 1942, the national organization changed its name from the American Association of Visiting Teachers to the American Association of School Social Workers. The change of name is indicative of a "gradual minimizing of educational training and experience, and a definite trend toward a complete identification with the social work field," to use the words of one of the national officers of the organization.

The work of the school social worker is really social case work with public school children. Children with behavior problems, emotional disturbances, and difficulties in adjustment generally are referred to her. Much of her work consists in case work with the child himself and visits to the home, often in the evening when both parents are at home. Contacts with other resources such as clinics, recreation centers, and the like are made. Frequently she works with a problem child over a considerable period of time. Her work, while not teaching in the academic sense of the word, must coördinate with the work of the school. For this reason, the wisdom of the training requirements in both education and social work are manifest.

The school social worker is not to be confused with the home teacher or the teacher of home-bound children. These are teachers in the academic sense, but are ones whose work is in the field outside the walls of the school.

Also, it must not be overlooked that in some communities there are variations on the required training and work of the teacher who visits. The historical backgrounds for these differences are interesting. In some communities, home and school visitors act as liaison officers between the home and the school. In some instances, these home and school visitors are a part of the bureau of compulsory attendance. Many of them, however, have a vision beyond mere compulsory attendance and interject into their work much of what might be called social case work. The requirements for this position, however, do not ordinarily require social work training. For the historical background of the visiting teacher movement, and for various adaptations of its service in different communities, one should read: 27, 40, 52, 69, 76, 86, 99, 106, 109, 110, 116, 132, 148.

Compulsory Attendance

Our forefathers, who wished our schools to prepare the young for participation in a democracy, conceived the idea of compulsory education. The actual accomplishment of this desideratum has not been without its difficulties and hardships. The age for compulsory attendance has steadily risen in many parts of the country. This, together with other expansions made incumbent upon the schools, has caused a serious difficulty. The difficulty is in the evolution of a satisfactory type of curriculum for those whose natural inclination would be to stop school early. It is not in place here to go into the administrative devices that have been tried—*continuation schools, trade schools,* and the others. The necessity for providing attractive education for our older youth is of the greatest importance.

Other Matters Which Interfere with Attention to Individual Adjustment

While considering the matter of attention to individual pupils' problems, we should, in all fairness, mention some of the other difficulties which teachers have had to face. In the interest of giving children instruction by specially trained teachers, many schools have introduced *platoon* or other *departmental plans.* According to these procedures, children pass from one teacher to another. In such systems the teacher of the third grade may, for example, have as many as 200 different children for one or two subjects in the course of the day. It is true that she may be teaching subject matter in which she has specialized, but one wonders how she can specialize in *children.* Large city high schools *housing several thousand* junior or senior high children must of necessity use something of this same factory system of mass production. Specialization and administrative economy are thus bought at the expense of *hand embroidery* on children. Very few individual children can have any degree of special scrutiny and developmental help. In some schools, even in the first grade, children may have four or five different teachers per day, and their teachers may have as many as 200 children per day. Under such circumstances, what likelihood is there that anyone is responsible for *personality development* in children?

Still another difficulty which the schools have had to face is that of trying to bring up to twentieth-century effectiveness a curriculum that was originally built largely in terms of *college entrance.* Fortunately, there is some experimental work going forward now in which selected schools have been allowed to throw off these shackles. They are training their children by progressive methods as determined by children's present needs and abilities rather than according to college entrance and future needs. The later academic progress of these children is to be watched carefully, and the chances seem good that even in college they will do better than children trained under some of the older curricula.

Improvements in Our Schools

One significant improvement of recent years is the development of *better techniques for teaching* and *diagnostic tests* for analyzing errors in particular subject matters (79). Reading is an example. Most adults who have not been in touch with the elementary grades within the last few years would have little idea of "how to go about" teaching reading by current methods. Many adults are surprised likewise to find that reading is not even taught *as such* in the first grade of some schools or at any rate not until late in the first year. Since reading is the tool by which much of the rest of school material has to be learned, it is important that it be mastered. It has also been shown that the largest number of failures in the elementary school are in reading (33). It is even being urged that behavior problems may be caused by the inferiority and inadequacy developed in a child who cannot read well enough to keep up with his work (73). Many schools are having reading clinics for diagnosis and treatment of cases of reading disability. While such treatment is very important, it will be surprising if the beneficial results of remedial reading claimed by some enthusiasts really materialize.

Some of our research in the field of reading disability has brought into the foreground the fact that very often failure in academic subjects is caused primarily by emotional blockings or personal emotional problems in the child. This matter is too involved to take up here in detail. Teachers may be interested in pursuing the matter further, however, by reading the following references, a few selected from a much wider possible list: 42, 117, 75.

The question of reading cannot be dismissed without a word about the services of school libraries and the coöperation between public schools and public libraries. Librarians trained in children's work can be of great assistance to professional workers who need help in selecting just the right book for a particular child. New York City has recently developed a reading list appropriate for each age level and has the books available for the children in the children's court (85). A librarian friend of the writer with great skill keeps at her fingertips a list of books for very special problems. She can easily suggest to a parent or teacher just the right book for the child who is jealous of a brother or sister, or a child with a certain behavior problem (within limits, of course). She was recently asked by a parent for a good story for his crippled and bedfast son to read to help the child build up good mental hygiene in spite of his affliction. The librarian gave the father several books, which he read and brought back, saying: "They won't do. All these children get well in the last chapter. My boy can't get well." With a little search this blessed librarian was able to find just *that* kind of book for the father.

Arithmetic has likewise been improved since the "good old days." Much of the useless cutting of pies into "sixteenths," buying cloth at two and five-sixths dollars per yard, papering rooms, measuring cords of wood, and the like has been eliminated. What is still more important, we know now better than formerly the degree of *mental maturity required* to master different operations in arithmetic and in other subject matter (81). Accordingly, many grade shifts have been made for teaching long division, fractions, decimals, and other operations.

Vocational counselors, with more or less training for their position, have been added to most large school systems. In some places, however, assignment to such positions is on the basis of length of teaching service rather than on eminent fitness for the job. Vocational guidance that is worthy of the name presupposes considerable professional training. *Personnel work* of various kinds is still too exclusively a service for high schools, since the rank and file of grade teachers have not been trained to take over such work (33, 87, 97, 99, 101, 106, 115, 116, 136, 143, 148, 149).

Many of our school systems are now embarking on broader "counseling and guidance" programs. Some states give a special type of teacher certificate after preparation for this work. Only a few of the many references available can be mentioned here (34, 44, 114, 116). Guidance means many different things, but many schools interpret the term to include some educational, some vocational, and some personal guidance.

Some of our public and private schools which are most progressive in their thinking are employing the services of both *psychologists* and *psychiatrists*. From a purely monetary point of view, it is probably too early to determine how much money is thus being saved by reducing retardation and repetition of grades. From the standpoint of personality development and mental hygiene, however, the cost cannot be too great (4, 33, 40, 52, 58, 81, 106, 107, 109, 110).

School Failures

One of the most difficult problems connected with school work is *failure*. From the standpoint of the taxpayer, it is important because it costs just as much to teach subject matter the second time as it did the first. From the standpoint of the school, it is important for many reasons, including sectioning, building programs, teacher-pupil load, and others. From the standpoint of the child, it is important because of the embarrassment, discouragement, *habit* of failure, and fear of punishment or rebuke at home. What is often overlooked is the fact that repetition of school work does not necessarily mean its mastery. Furthermore, repetition may kill attitudes that are even more desirable than mastery of subject matter. Imagine repeating Music or Art, and yet children have been required to do so!

It is not necessary at this point to repeat what has already been said about intelligence except to say that we should *always* know whether a child has the requisite intelligence to do the school work that is being required of him. It is the writer's feeling that in spite of books, lectures, and college courses on the subject of individual differences, there is still abroad in the land a rather general idea that any child can do the required school work "if he really tries." At least, children are often told that. How else can we account for the high school teacher who listed her failing students on the blackboard on a *Dishonor Roll?*

As our schools are organized at present, the *mental age* required for the year's work of the various grades is probably about that indicated in Table XVII (page 434). These ages are based on three assumptions: that the school work of the various grades is geared for *average* children; that many children start to the first grade at a little over six; and that reasonable allowance must be made for illness, moving, and change from one school to another.

TABLE XVII

MENTAL AGE REQUIREMENTS FOR GRADE WORK[4]

Grade	*Standard Mental Age*		
I	6–6 to 7–5	or approximately	7
II	7–6 to 8–5	" "	8
III	8–6 to 9–5	" "	9
IV	9–6 to 10–5	" "	10
V	10–6 to 11–5	" "	11
VI	11–6 to 12–5	" "	12
VII	12–6 to 13–5	" "	13
VIII	13–6 to 14–5	" "	14
IX	14–6 to 15–5	" "	15

Conversely, we can, if we know a child's chronological age and his grade placement, tell whether he is pedagogically retarded and to what extent. A child who is one year older than the age expected for his grade is not seriously retarded. If he is two years older, we should look into causes. One or even two years' retardation may be the result of illness, sensory defect, or perhaps particular subject-matter difficulty. Many schools require the reporting and individual examining of all children who are three years retarded. As a rule, the cause of retardation in such cases is primarily intellectual.

Causes of Failure, Other Than Low Intelligence

The child who fails either the semester's work or the work of occasional days is not always intellectually unfit for the work. Let us examine a few of the other causes (33, 79, 81). While *child labor* conditions throughout the country are both legally and actually better in this respect than formerly, yet every social worker knows that children ply street trades of one kind or another in defiance of child labor laws. How many days' work are failed because of fatigue, it is impossible to estimate.

Emotional difficulties often lie at the root of failure. Sometimes, perverse as it seems, a child wants to fail. The writer recalls one child with an I.Q. of 120 who was failing in the sixth grade. He frankly said in the psychological interview that he wanted to fail for two reasons. One was that his best friend was going to fail and he did not want to go on to the next grade until his friend was ready to go too. The other reason was that he never had failed, had never had that experience, and he wanted to fail in order to see what it would feel like.

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[4] Quoted from Terman's *Intelligence of School Children*, by permission of Houghton Mifflin Co., publishers.

Whether these statements represented the child's real feelings or not, it is impossible to say. The child was quite maladjusted in many ways; consequently, while it was evident that he wanted to fail, it may not be quite so evident *why* he wanted to fail.

Children have sometimes preferred to fail rather than to leave a certain teacher's room, and maybe, in other cases, rather than to go *to* a certain teacher's room. Sometimes a child who is getting emotional satisfaction out of *punishing* someone tries to fail for this reason. Where parental urgings and naggings and supervisions are *too* strong, such punishment motivation occasionally operates (6, 76). Where there is jealousy or sibling rivalry, failure may be a means of attracting some attention to one's self.

Again, failure may be caused by a genuine feeling of inferiority and a kind of paralysis of effort. This occurs, it appears, particularly when the child feels inadequate in some of the tool subjects particularly emphasized in his school—reading or arithmetic, for example. *Diagnostic tests,* which reveal the weak spots, are helpful in such cases. A child once brought to the writer's attention failed almost every question in arithmetic for a considerable period of time. A little diagnostic testing, which any teacher should have been able to do even without the use of specially prepared tests, showed that the child simply did not know his seven multiplication table. Every question involving the use of the seven table, which was the class work for that particular time, was therefore failed.

Physical examination is often overlooked in diagnosing the failing child. A child examined a few years ago in a psychological clinic was being threatened with failure in school and in addition was actually being punished for "dropping things" and for "doing such sloppy work." The fact that the child had St. Vitus Dance was either not known or was overlooked as a possible cause of failure and misdemeanor.

It would seem unnecessary to speak against either demotion or holding back as a means of *discipline,* but perhaps we had better not take a chance. As a matter of fact, a nine-year-old of the writer's family (it serves to keep theory *practical* if we observe a child in whom one has a personal or family interest!) was demoted once for two weeks because he often giggled in reading class!

Administrative Means of Preventing Failure

To go into detail as to the theories and methods of providing for varying rates of progress through school would be to go into the principles of education or of educational administration; this we cannot do. Mention of methods rather than discussion of methods will have to suffice (29, 33).

One method is to *promote or hold back on the basis of separate subjects* rather than on the basis of the entire semester's work. By such a plan, a child might be held back in reading, but be allowed to advance to the next grade work in everything else. Many modifications of this general idea have been evolved by schools that are genuinely interested in teaching children as well as teaching subject matter.

Another method, known as the *double-track method,* is to have the curriculum of the first eight grades so arranged that it can be completed in either six, seven, or eight years. After an intelligence test in the first grade, a child is temporarily assigned to the *six-year track* or the *eight-year track.* At several places along the line, he can transfer to the other track if the original placement appears to have been ill advised. He can, for example, at the end of the third year on the six-year track (when he is halfway along), change over to the other track and take four years to finish. Or a child halfway through on the eight-year track can, at the end of four years, transfer to the other track and finish in three years. Many of the children on the six-year track originally continue on that plan and finish in six years. A somewhat more complicated scheme for the junior high school, known as the *triple-track plan,* is essentially the same in principle.

Ability grouping or homogeneous grouping is perhaps the best known method of providing for differing rates of progress and differing abilities to expand horizontally. The most obvious segregation by such grouping is the class for the feeble-minded at one end and the class for the gifted at the other end. Beyond that, however, it is possible to take the more nearly average in intelligence and divide them into two or three sections in each class. While all of the originally claimed advantages for ability grouping have not materialized into actuality, yet with modifications and improvements, it will probably ultimately furnish one solution. One of the chief difficulties of the system is that any group of children is not homogeneous in all particulars (13, 33, 62, 78, 80, 81, 118, 143).

Unit assignments, according to one plan or another, provide units of work to be accomplished by each child at his own speed. When he has finished one unit of work in a given subject, he asks to be examined on it, and if he shows mastery, he goes on to the next unit. By such a plan no child ever fails; he simply keeps on at his unit until he has mastered it. This scheme requires individual assignments and individual recitation, either written or oral. *Group participation* is provided for in the social sciences and in auditorium periods and extracurricular activities. After all, why should there be group participation in spelling or the multiplication tables where each child has to do his own learning and where he is better off if he does *not* hear the mistakes of others? For more details on the administration of unit assignments, the reader is referred to any standard up-to-date text on education which discusses the *Dalton Plan, The Winnetka Plan,* or the *Morrison Plan* (143).

Changing teachers is a plan about which very little is said; yet at times it may have considerable merit. The writer has always been in sympathy with the idea of allowing college students, insofar as is administratively possible, to choose their college sections on the basis of the instructor desired by the student. By the same token, there are undoubtedly many cases in the elementary school where, for one reason or another, a child will "click" with one teacher and not with another. This is not necessarily a reflection on the latter teacher, either. Someone tells of a child who had such a fear and dislike of one teacher that he could not get along in her room at all. Case study revealed that the teacher greatly resembled an aunt of the child with whom he had had most disturbing experiences. In fairness to *both* teacher and child, he should have been put into the room of another teacher. In the meantime, attempts to condition the child positively to the first teacher could be made.

Success in School Work

Another point is sometimes lost sight of—namely, that particular success in school work is not always desirable. Sometimes academic grades are secured as a compensation for a feeling of *social inferiority.* Academic success may be a means of withdrawal. In such cases, it is infinitely preferable to make social participation easier for the child. We want to help him to take pride in such activity also.

Marks, Grades, and Reports

The systems of grading and of reporting are very different today from those in use at the time most of the readers of this book were in school. In this respect, school is a different world. Some schools, for example, have discontinued formal report cards for recording percentages or grades. One form of substitute is a conference with pupil and with parents. Another is a written verbal description of attitudes and grade placement (on the basis of achievement tests). In some school systems these descriptive reports, without marks and grades, are used exclusively for the first three or four grades. In some schools the children are encouraged to analyze their own work and write reports to be sent home to their parents. One child friend of the writer dutifully prepared her report of her own progress, attitudes, achievement, and the like. As a finale to her summary she wrote, "The trouble with me is that I mess around too much." Such a self-evaluation of work habits is worth much more than any report made by a teacher or an administrator. For a discussion of, and sample forms of, some modern systems of reporting, the reader is referred to Davis (29, 33). For accounts of the evils inherent in grading systems and the story of attempts to improve conditions, reference may be made to *Personality Adjustment of the Elementary-School Child* (33).

Tardiness

A very annoying, but usually not serious, school problem is tardiness. As with any behavior problem, we should look first for causes. Tardiness may represent a real reluctance on the part of the child to go to school and begin a day there. In such cases, punishment makes matters worse. In this respect, it resembles the sickness that many children have just long enough in the morning to avoid going to school. In either case, the difficulty needs treatment. If the child really does not want to go to school, it is certainly the part of the school to find out why. Sometimes the program which immediately follows the opening of school is responsible. A very wise teacher, with whom the writer talked recently, very gladly shifted classes, at least temporarily, for the sake of a shy little girl who was frightened by rapid-fire oral arithmetic which came the first thing in the morning.

Tardiness in many cases, however, does not so much represent an actual unwillingness to go to school as an inability on the part of the child or the family to arrange matters to insure promptness. Clocks that are not correct, late hours for retiring followed by late ones for rising, and too many morning duties and chores around the house contribute toward tardiness. In such cases it is very often advisable for the teacher to attempt to secure coöperation from the family. It is doubtful whether this should be done by sending *notes* to the home, certainly not by *other* children. In certain types of homes, however, the teacher cannot expect to put the matter entirely upon the shoulders of the family and receive effective coöperation in return. Where the family is not sufficiently interested to help, then something must be done to make the matter of sufficient interest to the child so that he will see to things himself. The writer remembers vividly a dull child who, through the first two grades, had never gotten into his stride. He was finally put in the room of a second-grade teacher who was encouraging the use of plasticene, which the child called his "cement." Modeling with plasticene was the first thing that had ever really "rung the bell" for this child. The plasticene periods came three times a week. On the nights before these days, the child would say to his mother, "Now, be sure to wake me on time tomorrow, for tomorrow is cement day." Resourceful teachers have sometimes devised coveted tasks to be performed *before school begins.* Such devices will act as incentives with some children.

As elsewhere, we must not overlook health factors. Some children are late, particularly for the morning session, because they need more sleep. They may be lethargic from a glandular condition which should be diagnosed and treated.

Efforts to promote punctuality by means of a room record are likely to cause difficulties. Where rivalry is keen, a child who finds himself about to be tardy may decide to return home and be marked absent rather than face the rebukes of both teacher and pupils for "spoiling the record." Incidentally, somewhat the same situation arises in some schools where great stress is put upon 100 per cent participation in school banking. The embarrassment of not having money to deposit in the school bank may lead a child to remain at home or to steal. Embarrassment and being different are such terrible things when one is a child!

Truancy (56, 71, 107, 134, 136, 148)

One city, in a report on truancy, recorded *20,000 unlawful absences* for one year! If we were to send out invitations to our home and many of the guests did not come, we would surely begin to wonder what was wrong with us or our home! It is strange that schools do not use the same reasoning. Let it be understood that truancy is primarily a problem between the school and the child; secondarily, between the school, the child, and the parents; and only thirdly, a problem to be referred to a juvenile court or any other outside agency.

The causes of truancy are many. A number of factors involved in tardiness may also be operative in producing truancy. Previous absences, justifiable or otherwise, which a child fears he cannot make up, may cause continued staying away from school.

The antagonism or indifference of parents toward school is often a factor. Some homes have used school as a threat of discipline to little children under school age! Home conflicts which make the child utterly miserable but which he seems unable to help may cause truancy. Truancy may be the child's way of running away from everything. Such conflicts sometimes also involve a more or less unarticulated desire on the part of the child to get even or to punish someone (76).

Emotional factors concerned with school life are sometimes too great for a child to bear. Embarrassment about shabby clothes or "hand-me-downs" that are obviously too large would prevent almost anyone from going into a situation where clothes would be noticed or commented upon. Some children have even been referred to in school as "court children," and there have been instances in which public note was made of those children whose families were "on relief."

Fear of ability to pass, lack of understanding of subject matter, unfavorable comparisons with the school records of siblings, or even being the largest in the class are all involved in the issues already discussed in connection with intelligence, grading, and marking. In truancy also they play a large part.

Inappropriate subject matter, because it lacks interest, induces truancy. One of our most prominent psychologists once told in a lecture of a very superior boy who was about to graduate, at an early age, from high school. Suddenly, there was discovered what should have been known all along—namely, that the boy had somehow evaded six semesters of high-school physical education. His graduation was held up, and he was told to report the next year to make up his six semesters of physical education. The boy attempted to abide by the decision, but spending the day doing nothing but physical education became monotonous to him, and after a short time he began truanting. The truant officer was sent to find him. After going to all the usual places where truants may be found, he reported that he could not find the boy. It was some time before it occurred to anyone to look for the boy in the public library. There he was, doing what was infinitely more profitable than crowding an ill-advised and overcrowded physical-education program into one day.

Truants examined by the writer give such a uniform and chronic explanation of their behavior that much speculation has been stimulated. "Why *don't* you want to go to school, John?" "Aw, they're all the time hollerin' at me!" While this is probably a figure of speech rather than a description of an actual schoolroom situation, yet the great frequency of the complaint, "holler at me," seems to have in it something that must be studied. Someday we shall have investigations made of the relative amount of truancy in the rooms of teachers with good mental hygiene as compared with that in the rooms of teachers with poor mental hygiene.

Keeping a diary record of a child's truancy sometimes reveals causes. What had happened just *before* he truanted? What days, or half-days, does he truant? Is it always the same days? It sometimes develops that a child truants only on the days when he has certain subjects.

Truancy figures usually go up in the spring. Counterattractions elsewhere become more accessible in the spring, and the school has more against which to compete.

The importance of truancy cannot be overlooked. Some workers with juvenile delinquents speak of it as the first step on the stairs to crime. (See Chapter XIV.) Certainly, it is likely to be accompanied by feelings of guilt and fear and to be associated with much undesirable and antisocial conduct. One of the most important issues is that the child must dispose of himself somewhere to avoid detection during school hours. Often the places are very undesirable. Sometimes the child steals "show money" so that he may hide in a cinema for hours at a time. One child known to the writer somehow secured a "school pass" for the street cars. He rode all day long, all over the city. Occasionally he *was* asked why he wasn't in school. He would reply that he had been sent on an errand to another school and was just on his way there. After truancy has reached a certain stage, it also may involve a fear of going home; this leads to the necessity of staying out all night and getting one's meals as best one can.

Time in the Child's School Life

There are several phases of this subject that give the more or less philosophical mind food for thought. Take the *bright child,* for example. No one can ever estimate the amount of time that superior children waste in the ordinary schoolroom. Undoubtedly many of them can do as much as the average child in from a third to a half of the time required by the average child. What to do with this spare time sometimes taxes the resourcefulness of a very bright child. Some of them resort to such things as teaching themselves to read with the book upside down. Time must be filled. This seems to be a universal law of human nature. Fortunately, schools are taking care of this problem for gifted children better than in the past, in ways which we have already discussed.

Pressure of time for *completing assignments* is often a source of nervous irritation to sensitive children. A psychologist friend tells of going into a classroom once where the teacher was giving drill to increase speed in reading. Her objective was better than her method, however. The class was reading aloud in unison and the teacher, ruler in hand, was keeping time and saying, "Faster, faster, faster." Some children in the class were almost in a frenzy of tension and anxiety.

Making up time. Some schools have a practice of requiring children to stay in "to make up time" lost by tardiness or truancy. As a matter of reality, time cannot be made up. *Work* can be made up and probably should be, as a rule. The writer once knew of a boy who had played truant considerably during one school year. The next year he started back with the evident intention of doing better. He found, however, that he was required to report to the principal's office or the study hall to *make up all the time he had missed the year before!*

Another disregard of the value of time is seen in the custom in some schools of sending a misbehaving child out of the room to sit in the principal's office. The idea seems to be not that he study or talk things over with anyone, but that he spend so much time just sitting. A slight variation is to send a child any place about the building for a time.

The old-fashioned methods of *suspension* and *expulsion* were not only admissions of failure on the part of the school, but they also wasted time. What was often worse, they actually provided time for wrongdoing outside of school. Fortunately, suspension and expulsion are fast being relegated to oblivion.

Homework may or may not be a waste of time (35). The homework that is done by other members of the family surely is. The homework that keeps conscientious and sensitive elementary school children out of bed until late hours and prevents their sleeping when they do go to bed certainly is.

The School and Other Agencies

Some college courses for teachers are now attempting to acquaint teachers with resources in the community with which they can coöperate in work with boys and girls. While it is still true that school problems belong primarily within the school, yet it is also true that teachers and administrators need to know when they have reached the limits of their own skills and where then to turn for help (33, 40, 52, 106). In large cities which provide directories of services for children, such should not only be available to teachers but should also be familiar to them. The coördinating councils now common in many parts of the country, and other similar plans with different names, aim to bring together for the service of children the various agencies, specialties, clinics, and other resources to work for the development of happy, growing, and adjusted youth.

A Philosophy of Education

Elsewhere the writer has expressed her views as to what she believes school and education should conceive their duty to be. It was said then as well as she can say it now, hence permission has been secured from *School and Society* to reproduce the author's fable, "The Man Who Would Educate His Son" (128).[5]

The Man Who Would Educate His Son: A Fable

Once upon a time there was a man who had a son. He loved his son dearly and believed that he should provide for his child the best education of which he knew. He gave much thought to the matter and decided what he considered the purpose and the aim of education to be, and what administrative devices and principles should be employed to bring it about. To this end he planned carefully for the education of his child. After considerable investigation he chose for his son a consolidated school which provided adequate transportation facilities. The building was scientifically heated, lighted, and ventilated. Architectural design was of the most approved type. School physicians, he ascertained, administered an up-to-date medical program of inspection and prevention. Trained dietitians planned noon lunches, and rest periods were a part of the day's curriculum. Recreational activities were carefully supervised, and playground and gymnasium projects were outlined in the course of study. The library of the school contained the best of the heritage of the past, together with the best of current science and literature. Above all, he assured himself, each teacher had been chosen because he or she was a specialist and a master in his own field. Reading was not taught as it had been when the father was a boy, but rather as the experimentalists said it should be taught. Visual and auditory aids were provided without stint. Social studies, the language arts, science, project activities, and units of work, he was told, were according to the best of current educational thinking.

Day after day and night after night, the man thought of little else than the education of his son. In his quiet meditation at eventide he was wont to say, "I thank whatever gods there be that my son is not being educated as some children are."

In time the father came to be known throughout the land as the man who *studied* education, the man who acquainted himself with the best administrative and supervisory principles and who studied school law. No one in the countryside thought more or knew more about best practices in education, and so it is small wonder that eventually he was sent for to attend a meeting.

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[5] From Florence M. Teagarden's *The man who would educate his son: A Fable.* Reprinted from *School and Society,* November 25, 1944, Vol. 60, No. 1561, pp. 347-349, by permission of the publishers.

The presiding officer of the meeting addressed him thus: "We bow before your knowledge of education. We respect your thinking and your erudition, and we beg leave to ask you a few questions. We should like to inquire in the first place if your son enjoys school and is eager every morning to be off to the school."

The man looked bewildered as he replied: "I cannot answer that question. I do not know whether my son *likes* school or not."

"Well, then," the interrogator continued, "does your son like his teachers? Is he fond of them?"

To this the man made answer: "I am sure I cannot say. However, I might add, I did not choose my son's tutors with any regard to whether they were individuals whom he would *like*. They were chosen because they know how to *teach*."

"Yes, of course," answered the president. "I can see that you might not know these things, but perhaps you *can* tell us whether your son studies and learns because he is obliged to or because he loves to."

"No," said the father, "I do not know that, but I know that he *does* study."

"Well, with your indulgence, we shall ask you questions along a somewhat different line. How does your child get along with other children of his own age? Does he adjust better to them, or to younger children, or does he get along only with his elders?"

"I cannot tell you how my son gets along with children. How should I know that? I can tell you, however, that in my presence or the presence of his teachers his behavior is exemplary."

"I see," said the president. "Perhaps you have observed how your son responds to people from other nations and races. How does he feel about having Negro children or Japanese children in his activity groups and does he object if the Mexican child goes to the school party?"

"No, I do not know these things."

"Well, of course, it *is* hard for an educator to know *everything* about a child. May we ask you some further questions? How does your son feel when the other team wins the game? Perhaps you can tell us that."

"No, I am sorry. I do not know that."

"All right, then. Maybe you will be so good as to tell us how your son feels about home, and marriage, and children. Does he understand how to get along well in the family? Do you know what his attitudes are toward his parents?"

"I am sorry, sir, I have never gone into that. I have concerned myself about my son's *education*."

The president paused. He turned to the secretary and the vice-president and conferred with them for a time. Finally, he said in a quiet voice: "We must not allow our meeting to fail. We shall proceed. Sir, will you tell us what your son would do if he saw an opportunity to get into the movies for less admission than his actual age requires? Would he pay the honest admission, or would he deceive and thereby save some of his allowance?"

"I do not know that about my son, sir. As I have told you, I have devoted my interest and concern to my son's *education*."

"Well, maybe that *is* being rather minute. But you can tell us, of course, whether your son is honest because he wants to be, or because he is afraid to be otherwise, or because he thinks that in the long run it would not pay not to be honest."

"No, sir, I do not know how my son feels about the principles of honesty, nor do I know whether they are being taught in his curriculum."

"I see. You do not know about your son's feelings in regard to honesty. With your permission then we shall go into a somewhat different field. Do you know whether your son assumes and maintains responsibility?"

"Responsibility? No, I do not know. I have told you that it is my son's *education* in which I am interested. I know nothing as to whether he concerns himself about taking responsibility."

"Yes, yes, yes, but if your son makes a promise or a commitment does he carry through faithfully in its execution?"

"I cannot tell you that. Not many persons seem to regard promises seriously today—either individuals or nations—so how should I know whether my son does? But, by the gods, *should* I know that? I am truly sorry, gentlemen, that I do *not* know," and he bowed his head slightly.

"Well, then, sir, let me ask you further. Does your son have any worries that he carries to school with him and that may hinder his learning?"

"Worries? Worries? Do children have worries? I do not believe they do. If my child has any, I certainly do not know what they are."

"How about fears? Is he afraid of anything? Is he afraid of people or of social situations or afraid of trying new things? Has your child any fears?"

The father hesitated, and then slowly he replied: "I shall have to admit I know nothing about any fears my child may have—I suppose he *may* have some. I remember—I remember—Oh! how *well* I remember some of the fears that almost crushed my childish heart when I was my son's age! Do you suppose he does have fears and I have never helped him about them?"

"Well, well," said the president, "I did not intend to hurt you. Perhaps even a more important thing to know is whether your son has someone to whom he can *talk* about his fears, his worries, his doubts, his questions, and his hopes and aspirations. Is he a child who talks freely about such things or does he keep them all inside himself? Do you know what or whom your son uses for his emotional outpourings?"

At this the father hesitatingly rose from his chair. His shoulders drooped and his eyes were downcast. He stood thus for a time and then slowly he straightened, raised his head, and looked directly at those before him. Warm, vigorous life seemed to have begun pulsating throughout his body. "Gentlemen," he said, "I have had a rebirth. It is as if suddenly I were seeing with new eyes. It has never been so clear before. I see it now as if it were written out there before me. I have not been *educating* my son. All I know is that he has been exposed to the learning of the academicians. Oh, I see it! I see it! I see it! That isn't education, that *isn't* education. My son's heart, and his soul, and his feelings must be educated, and I have been thinking only of the education of his mind, and that is not *education*. My child may have had no real education, for aught that I know about it. Gentlemen, until this moment I have never known the meaning of Education."

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Chapter XIV

BEHAVIOR DIFFICULTIES

Danger in Categorizing Children

The use of diagnostic names of any kind for children is an extremely critical matter, since misunderstanding and incorrect treatment may so easily result.

One scarcely knows, for example, whether to speak of *children with severe behavior disorders* or to speak of *juvenile delinquents.* Fallacious thinking may result in either case. By whatever name designated, most of these children are still much like average children except in one or more areas of behavior of which society does not approve. The points of difference between them and so-called normal children, however, are points upon which society lays great stress. There is reason for segregating delinquent children in our thinking, temporarily, for the practical reason of sheer numbers, if nothing else. The White House Conference Report on the *Delinquent Child* (138) estimated that approximately 200,000 children "pass through juvenile courts in the United States" every year. Estimates of the proportion of boys to girls differ from about three boys to one girl, to five or six boys to one girl.

A word of caution may be in order relative to statistics on juvenile delinquency. Just as absolute figures on divorce as reported in newspapers often lack statistical quantification, so also with figures on juvenile delinquency and so-called increases in delinquency. One neighborhood known to the writer had an increase in the number of children under care of the juvenile court during a certain year. As a matter of fact, a large part of this so-called increase in so-called juvenile delinquency resulted from the fact that arrangements had been made between the court and a certain industrial area by which, in the interest of safety, children were apprehended and taken for hearing when they trespassed on the railroads in the yards around the industrial plants. In other words, this behavior had become "delinquency" by fiat. It must be borne in mind that what is "delinquency" in one court or one area may not be so considered in another area (46). It must not be understood, however, that no one knows anything about the figures on delinquency. The United States Children's Bureau has arrangements by which 400 courts throughout the country participate in a statistics project by sending in regular reports on the volume and nature of their work.

Ignorance About Juvenile Delinquents

Much research has been made and is being made upon juvenile delinquency and juvenile delinquents. The accompanying list of references will give the reader at least an idea of phases of the subject reported in the literature. The last twenty-five years have produced innumerable articles and books on the subject, and yet the best-informed in the field confess themselves to be quite ignorant about it. Healy and Bronner (59), who have studied juvenile delinquents intensively and extensively, say:

> It might almost be said that we are still in the dark ages, or at least in the prescientific era of treatment of juvenile delinquents. What we do see very plainly is that at present there is very little general conception of the possibilities of getting away from largely worthless and non-curative methods of dealing with cases of serious delinquency.[1]

The White House Conference (138) was no more optimistic about our present-day knowledge when it reported: "There still exists every degree of attempt at understanding the delinquent; there is much that is merely empty aping." [2]

Follow-Up Studies on Crime and Delinquency

In 1934, as a part of the Harvard Crime Survey, Sheldon and Eleanor Glueck published their *One Thousand Juvenile Delinquents* (52). This was a follow-up study of 1,000 boy delinquents who, during the years 1917 through 1922, had been sent by the Juvenile Court of Boston to its clinical adjunct, the Judge Baker Foundation. The procedures used in both the court and the clinic were studied as well as the subsequent history of the boys themselves. In spite of the machinery set up in the name of treatment, 88.2 per cent of the 1,000 delinquents became recidivists; that is, they continued delinquency and were "repeaters." The authors conclude that the study justified "an attitude of skepticism regarding the degree of effectiveness of the entire juvenile clinic and juvenile court movements." They add, however, "The path of progress does not seem to lie in the direction of abandonment of juvenile clinics and courts."

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[1] This and other quotations from Healy and Bronner's *New Light on Delinquency and Its Treatment* are made with the permission of Yale University Press, publishers.

[2] This and other quotations from the report of the White House Conference on Child Health and Protection, *The Delinquent Child*, are made with permission of D. Appleton-Century Co., publishers.

In 1940 Glueck and Glueck brought out *Juvenile Delinquents Grown Up* (50). This book gives an added 10 years' history of the original 1,000 delinquents, from an average age of 14 in the first study to an average age of 29 in the present study. Both recidivism and the number of serious crimes committed show a significant decrease in successive follow-up studies. Much as life insurance companies can, from their records, predict the chances of longevity, so the Gluecks have built up prediction tables by comparing, in the lives and in the penal treatment of those who did improve, their behavior throughout a period of time as compared with those who did not. We shall have more to say of prediction tables later.

It is indirectly of interest, in our consideration of juvenile delinquency, to note that the Gluecks have also followed a large number of adult offenders over a long period of time. In 1930 they published *500 Criminal Careers* (49); in 1937 they reported a follow-up study of these same men in *Later Criminal Careers* (51); and again, in 1943, they brought the history of these men up to date in *Criminal Careers in Retrospect* (48). In this report they say:

> We are thus led to the conclusion that it is not primarily or fundamentally either chance or the fear of punishment, but rather the presence or absence of certain traits and characteristics in the constitution and early environment of the different offenders, which determines their respective responses to the different forms of treatment and determines, also, what such offenders will ultimately become and what will become of them.[3]

Reference has already been made to *New Light on Juvenile Delinquency and Its Treatment* (59) in Chapter VII. It was a three-year study of potentially serious and repeating delinquents from Boston, New Haven, and Detroit. Definitely feeble-minded children were not chosen for study although, through mistake, one was included. The method was to choose delinquent children whose families could be thoroughly studied and who had non-delinquent siblings. A sibling of the same sex, if available, and as near the same age as could be obtained was matched with each delinquent for comparative study. Finally 105 pairs of such delinquent and non-delinquent siblings were secured. The delinquent children all had received psychiatric, psychological, and social-work services.

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[3] Quoted from *Criminal Careers in Retrospect,* by Glueck and Glueck, by special permission of Commonwealth Fund, publishers.

After the three years of treatment, data on the delinquents were tabulated as to causes, comparisons with siblings, and outcomes. (Other aspects of this study are discussed in Chapters VII and XIII.) It was found that "for a diagnostic and prognostic classification three major groups were distinguishable" as regards the delinquents. Because this grouping has so much of practical value for anyone working with large numbers of delinquents, some of the details are given here.

Group I included 26 children definitely diagnosed as abnormal personalities of various types: brain-injury cases, post-encephalitics, confirmed homosexuals, psychotics or prepsychotics, neurotics, epileptics. Mental defectives would be included in such a category. Healy and Bronner say that if mental defectives were added, such a group would account for about 20 per cent of delinquents in any unselected series of delinquents. Follow-up investigations which covered from 2 to 4 years revealed that only 5 cases out of the 26 in Group I were reported as doing positively well during the follow-up period, and the authors say: "We confess lack of complete confidence in the future for all of these."

Group II included 50 cases for each of whom it was judged that treatment of the delinquency would be impossible if the child remained at home and for whom necessary change could not easily be provided. These were those cases "in which the social pathology, particularly as involving human relationships within or outside the family circle, appears to weigh so heavily against the possibility of successful treatment of the delinquent in his family environment that the given situation seems largely hopeless." The family picture in the lives of Group II children included psychoses, alcoholism, mental defect, dire poverty, immorality, and many other antisocial factors. In addition to therapeutic clinical work with these cases, environmental changes were brought about for 19 who were put into foster homes and 11 who were put into institutions. The others remained at home. Thirty-eight per cent of the group were non-delinquent for two or more years, and a few others were definitely improved.

Group III included 67 cases where the outcome seemed hopeful because "the factors of personality difficulty and social pathology were not so severe or so piled up that they seemed to offer insuperable obstacles to therapy." At the end of two or more years, 19 per cent of these children were still definitely delinquent.

Other findings of these two exhaustive studies will be mentioned again in connection with other phases of our discussion of delinquency. Disheartening as the total results of the research seem to be, we shall continue, nevertheless, to do what we can for individual children.

At this point we may reconsider those cases, cited in *Reconstructing Behavior in Youth* (60), where foster-home placement was tried. In Healy and Bronner's more recent book (59), they withdraw some of the previous statements of what had appeared to be successful outcomes. They say: "We have followed the cases then studied after an interval of years and discover that upon return to inimical conditions a majority sooner or later reverted to delinquency."

In *Treatment and What Happened Afterward* (61), Healy and Bronner (1939) reported on 400 cases that had been treated at the Judge Baker Guidance Center in Boston some five to eight years previously. In 1944, Bronner brings the report up to date (22) in a second report. The study again shows the necessity of separating the unstable egocentric, abnormal personalities for whom intensive psychotherapy does not yield gratifying results.

Bowler and Bloodgood (17), in a government publication, report on 621 boys from five of the best-known correctional institutions of the country. Of these boys, 66 per cent had been arrested and 58 per cent had been convicted one or more times during the five or more years since their release. Sixty-eight per cent had either failed entirely, or their reported success was of doubtful character. Healy and Bronner (58), in an earlier study, found that, out of 675 Chicago juvenile delinquents, 45 per cent succeeded in adjusting and 55 per cent failed.

There are many other studies that might be cited. It is interesting to note that the more recent studies are somewhat less optimistic than earlier ones. In reality, this fact may be salutary for at least three reasons. In the first place, undoubtedly we are now using more reliable statistical means of evaluation of results than were formerly available. Although the first impression gained by the use of more critical measuring rods may be disheartening, in the end we shall eventually thereby learn more about how to help delinquent children. In this connection, it must also be borne in mind that *ipso facto* the longer the chronological record of *any* group of children is kept, the more chances there are of children's getting into difficulty. Therefore, the longer periods over which delinquent children are now being studied naturally will add *some* recidivism. In the second place, discouraging as some reports on delinquents have been, nevertheless they will ultimately be of value if they show us wherein delinquent children *do* differ from other children. We have already said that most of them differ from average children most conspicuously in social behavior. Our investigations on recidivism as well as case work and clinical experience with delinquent children may eventually show us *why* these children do not respond to ordinary laws of learning or to usual motivations, or why they seem unable to establish constructive relationships with the case worker, clinical psychologist, or psychiatrist. A study of these factors will, it is to be hoped, throw light on why delinquent children behave as they do, and why they recidivate when they do. A third value may emerge to reduce the pessimism engendered by recent studies. At least, a clinical psychologist may be entitled to ask a question in this respect, if not to answer it: Will the day come when we shall be able to understand our problem children not only better but also *more immediately?* Shall we then be better able to sort out those problem children who will profit from psychotherapy? Shall we then be able also to select more accurately and more immediately those children who, by reason of congenital defect, central nervous system injury, disease sequelae, and the like, require a kind of treatment process that can be provided better through the agency of a juvenile court than in any other possible way?

Nature of Juvenile Offenses

A complete list of the misbehaviors of children would greatly resemble a corresponding list for adults, at least so far as variety is concerned. A mere table of frequencies of particular offenses, however, may conceal much of psychological importance. Stealing of automobiles may be a case in point. Of course, it may be true, as some have said, that a certain percentage of those who steal cars bear a striking emotional similarity to each other and can be understood only if their deeper motivations are thoroughly understood. On the other hand, it is certainly true that with many a youth stealing of automobiles is not very different in motivation from "hopping" a street car or a freight car, sneaking a ride on a roller coaster, or "borrowing" a skooter or bicycle. No doubt, the youth of forty or fifty years ago got into buggies left in hitching-yards, took a ride, and returned the vehicles with no more evil intent than some of today's youths "steal" automobiles. Because of the necessity of laws for the protection of the public, however, stealing an automobile is a serious affair. An additional inadequacy of figures on offenses is shown in the fact that, as every social worker knows, the establishment of confidential relations with the child is almost sure to bring to light self-confessed delinquencies of which there had been no record.

Offenses of boys. Almost without exception, lists of offenses committed by large numbers of boys put stealing in the first place, followed by running away, truancy, and sex misdemeanors, in about that order of frequency. Other offenses occur less often (55, 84, 115).

Offenses of girls. There seems to be almost unanimous agreement among authorities that sex offenses head the list for girls, followed by running away, stealing, lying, and others. The difference in number of sex offenses charged against girls as compared with those charged against boys is striking. There may be several reasons for this. One reason is that sex misconduct, in the past at any rate, has been considered a more serious delinquency—and therefore more likely to be apprehended—when occurring in girls than in boys. During adolescence, girls are also more physically mature than boys of the same age and may, therefore, be more accelerated sexually. Other reasons seem to be lacking for the great excess of charges of misconduct for girls with members of the opposite sex, since a member of each of both sexes is involved in heterosexual conduct (14, 31, 54). Reported sex offenses of girls number three to five times those of boys (25, 56, 98).

Factors Related to Juvenile Delinquency

One wonders whether any statistical treatment of data on juvenile delinquency will ever separate out for us the relative roles of all the factors that accompany juvenile delinquency. For example, low intelligence, emotional instability, poverty, and ill health are likely to be parts of the *same* picture. How much of a child's behavior may be due to one and how much to another of these factors it is usually impossible to say. The possible bad effects of overcrowding and bad companionship are *evident,* whether we have adequate statistics upon them or not. We have no statistics as to the influence of the publicity given to particular acts of delinquency in producing *more* delinquency. The kindly but harmful notoriety given to runaway children, for example, may be provocative of further attempts to secure attention. The newspaper picture of the "bright" little child surrounded by police, eating an ice-cream cone and wearing a policeman's hat may encourage that child, as well as others, to try his luck again at running away, but we have no frequency tables on such behavior. Undesirable roadhouses and barbecue stands have furnished the setting for much delinquency, even though as yet we have no adequate statistics on this point.

It is obvious to anyone who works with children that statistical trends or averages may mean nothing as applied to an *individual child.* If only one child out of a thousand in a public school, for example, has a toothache, the percentage is small. However, we shall try to do something for *that* child, even though he is only one-tenth of one per cent of the group. Obviously, if 25 per cent of these same children had toothache, we should introduce administrative procedures to see what factors deleterious to dental hygiene were operating in the community. So it is with juvenile delinquency statistics. Mass percentages have shown us certain large areas in which social reform should be introduced or clinical methods should be changed. In the meantime, most of us continue to work with *individual* children who may or may not be like the average (69, 103, 119, 131, 133).

Home influences. We have just emphasized the point that statistics fall far short of revealing all the subtleties involved in juvenile delinquency. There is no place where this is more true than in regard to home influences. Indeed, one wonders whether, if all the psychological factors in the home were conducive to good behavior, any child would ever become delinquent. Certainly a child from such a home could withstand considerable buffeting from unfavorable neighborhoods, recreational deprivations, or even poor health. The various influences of the home have been discussed in Chapter VII in more detail than is appropriate here. Some statistics, however, may be helpful. Figures on the percentage of homes broken by death, separation, divorce, or absence of parent because of employment run high for delinquents as a group (138). Estimates as to prevalence of broken homes in cases of juvenile delinquents run from 30 to 50 per cent (138). A Children's Bureau Study (74) reports that, of 10,845 delinquent children reported by 10 juvenile courts, 40 per cent had come from homes broken by death, desertion, divorce, or separation. Of the remaining 60 per cent, a large number are said to have come from homes where the mother was employed outside the home or where other abnormal conditions prevailed. It is difficult to evaluate these figures, however, without knowing the percentage of broken homes in which the children do not become delinquent. Healy and Bronner (59) report that 66 per cent of their delinquents came from homes in which both parents were in the home. Many otherwise intact homes that they studied had numerous "inimical family situations."

As was brought out in Chapter VII, there are many homes that are "psychologically broken," even though the physical home remains intact. In addition, bad health of parents, low intelligence, and many other factors may tend to produce unfavorable home conditions. *Criminal Careers in Retrospect* (48) emphasizes that one of the differentiating items of data between the unreformed group and the reformed group was the parental economic dependence of the former group. Stepparents are sometimes a disturbing factor to a child. The half-orphan also seems to be in a particularly unfortunate position, according to many statistical reports on delinquency (85). Figures indicate likewise that, so far as group averages are concerned, the death of the father and the consequent enforced absence of the mother from home for employment is a particularly devastating experience. Statistics also show that, on the whole, bad home conditions work more disastrously for girls than for boys.

Health. There was a time when it was thought that malnutrition and poor health were most important causal factors in juvenile delinquency. Burt (25), for example, reported that the 13-year-old English boys in reform schools whom he studied were four inches shorter and nine pounds lighter than normal boys of their age. Healy (56) shows that this rather commonly held foreign viewpoint does not seem to maintain in this country and that overdevelopment or precocity of physical development may be just as antithetical to good conduct as underdevelopment. The White House Conference (138) says, "Bodily factors as causes of delinquency must not be overemphasized." The Glueck study (52) on 1,000 delinquents reported that 57 per cent were sound, 30 per cent were in fair physical condition, and 13 per cent were in poor condition (including epilepsy, tuberculosis, syphilis, and gonorrhea). However, a considerable number of these 1,000 cases are reported to have had nervous habits of one kind or another. Healy and Bronner (59) found that physical status did not distinguish their delinquents from their non-delinquent siblings. They do mention, however, that the delinquent siblings had worse developmental histories and had responded more poorly to early habit training. They were also markedly more restless and hyperactive. The latter condition may be either cause or effect (15, 67, 69, 70, 80, 82, 123).

Head injuries. Healy and Bronner (59) found, in their Group I, 9 cases of severe head injury out of their 153 cases—"clearly a much greater proportion than for the general population." Case studies of delinquents, of course, frequently mention "head injury" as being the turning point in behavior. The White House Conference Report (138), however, calls attention to the fact that head injury does not always mean brain injury.

> A history of a head injury, such as a scalp wound or even a fracture of the skull, is no indication that there has been any serious concussion. Perhaps the best evidence of concussion is to be found in a more or less prolonged period of unconsciousness occurring directly after the injury (138).

The report cites studies on large numbers of cases in which from about four to six per cent gave evidence of serious head injury.

A number of years ago a mother brought her young son to the writer for consultation. The child, although at the time only four years of age, was certainly a problem. He was hyperactive and his behavior was quite erratic, in spite of what proved to be a good intelligence. Interview with the mother revealed two factors of importance. One was very unstable family discipline—a kiss one day for what had been punished the day before. The other factor was a history of a most difficult delivery of the child, with all manner of complications. So as not to overlook any possibility of brain damage, the mother was advised to have the child seen by a neurologist for study, while the mother and the writer worked along the psychological lines of child-rearing. The report came back from the neurologist over the telephone: "The problem is all *yours*. There is nothing whatever wrong with this child's brain or nervous system." Still wondering how such a very difficult head delivery could have escaped producing brain damage, the writer went ahead with the psychological program. Ahead, but not far. Nothing worked. Everything was tried. Finally, in desperation the family sent the child away to a private school. This was followed by dismissal and return home, and then a progression from one public school to another. When things became too bad, the mother would return to the psychologist. Just why she did so is not clear, for certainly the psychologist had not demonstrated any remarkable therapeutic skills. Every once in a while, however, the suggestion would be made that the child be given another neurological examination. All such examinations, however, were negative, and each time the problem was put back into the lap of the psychologist. Finally one day, after this trial-and-error procedure had been going on for more years than the writer likes to admit, the mother returned once more. She was in tears. She said: "What am I to do? My child has been told *not* to return to school, and now the attendance officer is after me saying he must be *in* school." The child's record was pulled from the files and reread. By this time encephalography was beginning to be available. This is a technique by which air is injected into the spinal canal and into the ventricles of the brain. By this means, X-ray pictures of the brain may be made. Arrangements were made to have such an air study made on the boy. When the plates were developed, there was evidence that even a layman could see, if not interpret. The cortex on the two hemispheres was as different as if taken from two different individuals. On one side the cortex, the doctor explained, was adhered to the brain in such a way as to prevent adequate circulation. The other side was apparently entirely normal. The results of such damage in specific areas can be diagnosed only by technically trained doctors, of course. It is interesting to note that before the days of air studies and of electroencephalograms, to be mentioned below, gross examination of reflexes and the like by neurologists might not ever unearth the existence of severe damage where the damage did not involve paralyses, tremors, convulsions, and so on. In this case, there is no way of knowing whether brain damage had affected intelligence or not, since no tests were made before the damage was caused, obviously. The intelligence was quite adequate (Binet I.Q. about 120), but whether it might have been higher had it not been for the birth injury there is, of course, no way of knowing. The damage was of such a nature as to interfere with voluntary control of behavior —a phenomenon that had been in evidence during all the years the child was under study. "I don't know why I did it, Mother. I couldn't help it, but I won't do it again" had been a constant and apparently very truthful refrain. In this case, it must be admitted, the result of the air study was one of explanation rather than cure. At least, the question of the child's behavior was taken out of the realm of the *moral* and put into the category of the *neurological.*

Two factors make careful scrutiny of reputed brain injury, falls, and other accidents necessary. One is that those interested in children tend to look for causes of erratic behavior and, if there *is* any history of falls or injuries, they are likely to exaggerate their significance. The other factor is that falls and head injuries may be concomitants of, rather than causes of, abnormal nervous conditions. Epileptic children and some defective children with poor motor coördination have *ipso facto* more falls than normal children. Neither has it ever been determined how many children have suffered severe head injuries and yet have not become delinquent. Kasanin (70) may be consulted for reports on 120 psychopathic personalities, 10 per cent of whom had had serious cerebral injury. Blau (15) gives similar case histories.

Another phase of the etiological role of brain injury in producing delinquent behavior is stressed by Healy (57). This is the brain-cell deterioration sometimes produced by anoxemia or oxygen starvation. Healy quotes Chornyak (29) to the effect that the higher cortical centers contributing most to the control and organization of behavior and personality are peculiarly susceptible to anoxemia. It would appear, then, that severe cases of respiratory diseases such as whooping cough or pneumonia and prolonged asphyxiation at birth may produce such brain damage. Healy feels that many cases of abnormal personality "must be under suspicion of having suffered brain damage from anoxemia."

Lurie and Levy (81) claim that early whooping cough may lead to severe behavior disorders, deterioration of intelligence, distortion of personality, and even psychotic manifestations. For a sane review of the various factors—physical and physiological, as well as social and emotional—that influence the behavior of the problem child, the reader is referred to the article by Kanner (66). Ford (44) and Kanner (67, 68, 69), Rosanoff, Handy, and Plesset (106), Yerbury and Newell (145) should also be consulted.

Modern literature in the field tends more to a belief in brain damage as an etiological factor in behavior disorders than some of the earlier studies. Strauss (118), for example, gives some case histories in "brain-crippled children." They lacked the ability to discriminate between essential and non-essential details. These children also tended to reality evasion and grotesque phantasy. Evidence from the study of electrical activity in brain tissue indicates a higher percentage of abnormal brain waves in problem children than in other children. Literature on such electroencephalography is quite too involved for our present consideration, but it may be reviewed by reference to Gilman (47), and Henry (62).

In connection with the whole question of the effects of brain damage on behavior, one is reminded again of Bender's observation (12) that children denied parental love behave in much the same way in some respects as brain-injured children. When one finds a case in which there is both emotional insecurity in the home *and* possible neurological damage, the problem becomes so involved that, if one takes hold of it in one place, it bulges out in another. A mother recently was referred to the writer by a prominent pediatrician who reported much illness, hospitalization, and even surgery. The child in question was eight years old and was utterly past his mother's understanding. His school record was poor as regards attendance and punctuality, but was otherwise satisfactory. The most recent things of which the mother complained included the following: A few days before, the boy had taken his aunt's watch and had chewed off the stem in order to take the watch apart (which he had then done). He had taken his three-year-old sister to the store for bread for supper and had returned without her about eleven o'clock at night, after the whole neighborhood had been hunting for the children. Whenever there was rain, the boy would sit down and slide down a muddy hill from school. Ordinarily his clothes had to be completely changed at noon before he could return to school. Running away periodically added to the list. Inasmuch as the child had been referred by a physician and inasmuch as the mother seemed to be an intelligent and interested mother, it seemed only natural to go into the matter of the child's health history first. There were enough facts in this recital to have explained a large amount of disturbed behavior. Before finishing the first interview, however, the mother was encouraged to talk about the child in relation to the family situation. Enough came out in this connection that the mother suggested the psychologist get in touch with the juvenile court, which had a history of the child given at a time when her present husband had accused the mother, before the court, of neglecting her children and of alcoholism. Somewhere in the mother's background there must be something that is fine. Otherwise, the life she led as a child, when she was sent out to beg, her life with the father of this child to whom she was never married, and her subsequent career would have left more evidence of physical and social deterioration than is apparent in her at this time. Not for many years has the writer studied a child with such a poor family history for two or three generations. The present husband of the woman (her second) apparently does not care for or take much interest in this child, born out of wedlock, and the mother, on the other hand, is afraid her boy is going to "grow up and be sent to reform school like his child by his first wife was." So far, only the first chapter of the services of the pediatrician, the psychologist, and the social case worker can be written, but at least the wheels are starting to turn. The outlook is not, at this point, too hopeful. A combination of bad physical factors that cannot be changed and of bad emotional and environmental factors many of which cannot be changed make the prognosis for re-education of this eight-year-old boy something to draw a sigh from anyone who really is interested in the life of a child.

Sensory defects. Perhaps no one knows the number of sensory defects to be found among delinquents, and perhaps the aggregate number is of less importance than the results when such defects do occur. Healy (56) estimated that defective vision was either a major or a minor factor in about 10 per cent of his cases. In their more recent study, Healy and Bronner (59) found 17 per cent of their cases with marked visual defect. It is well known that eye strain produces an irritability and a very diffuse discomfort that may easily lead to erratic behavior. The handicap of poor vision in school is probably of sufficient significance to receive more attention than it does. The psychological effects of *strabismus* or cross-eyedness are sometimes very pronounced. As simple as the treatment for this condition usually is in early life, it seems unfair to allow any child to struggle against both impaired vision and the embarrassment caused by cross-eyedness.

Disease and delinquency. A discussion of the effects on behavior of certain diseases such as chorea, epilepsy, and encephalitis is reserved for Chapter XV. Endocrine disturbances undoubtedly affect behavior. In the first instance, the effect may be primarily on health, thus inducing restlessness, irritability, and many other behavior manifestations. Somewhat more indirectly, endocrine imbalance may produce psychological anomalies. Where body build or development of either primary or secondary sex characters is interfered with by faulty endocrine function, bad mental hygiene may result. Bad mental hygiene in turn predicates undesirable behavior. The fact remains, of course, that there are children with endocrine dysfunctions who do not become delinquent (59, 80, 82, 83).

Avitaminosis is being seriously studied now also. Deficiency in vitamin balance without doubt affects health. We still need evidence as to what the specific results in behavior are.

Intelligence. For an excellent review of trends of thinking on the relationship of intelligence and delinquency, the reader is referred to Pintner (96). Pintner lists 41 investigations in this field from 1911 through 1929. The percentage of feeble-mindedness reported for delinquents in these researches runs as low as 7 per cent and as high as 93 per cent. One study of 2,000 cases found the percentage to be 11; another, of over 1,200 cases, 7 per cent; another, of 4,000 cases, 13 per cent. In another series of studies dated from 1923 through 1928, according to Pintner, the median or average I.Q. for different delinquent groups runs from 76 to 90. Just why the initial enthusiasm for intelligence tests as panaceas for all social ills should have run the percentage of feeble-mindedness so high as has been reported is hard to understand. More conservative estimates are given by Healy and Bronner (58), who found over 75 per cent of their cases to be normal in intelligence. The Gluecks (52) report 70 per cent to have I.Q.'s of 81 and over. In their more recent work, Healy and Bronner (59) say they did not find "the slightest evidence that those of higher intelligence rating according to standard-age-level scales did relatively better either during the treatment period or subsequently." The author's personal experience leads her to feel that society must recognize, as we have not hitherto done, the peculiar educational, vocational, social, and ethical hazards for those children with I.Q.'s ranging from about 70 to 90.

These are the children who learn more slowly in school than the average and yet are not, as a rule, segregated for "special class" instruction. They are also the children who, as a rule, do poorly in shop courses and vocational courses. Other things being equal, vocational openings do not come to these children when grown, so long as employers can hire persons of higher intelligence. On the other hand, an intelligence represented by I.Q. 70 to 90 mingles in society freely and meets all the temptations and most of the conflicts encountered by higher intelligences. In this last particular, one is tempted to say, these individuals are more of a menace socially than the definitely feeble-minded who are more likely to be recognized for what they are and are treated accordingly.

In the light of practical experience, it is obvious that the above figures need interpretation. *Other things being equal,* any case worker or probation officer would predict a successful outcome for a delinquent with an I.Q. of 90 before he would for one with an I.Q. of 60. Kriegman and Hilgard (71), for example, found best results from psychotherapy for children aged 10 or less and with I.Q.'s 110 or over. The point seems to be that other things are not always equal. Better home conditions, more sympathetic understanding on the part of teachers, better physical condition, better motivation toward socially acceptable conduct do not always accompany higher intelligence in a child. The matter seems to reduce itself to about this—namely, that intelligence is only *one* factor in the prevention of delinquency and in the successful treatment of delinquency. However, the amount of feeble-mindedness, and particularly of *dullness,* and the amount of *school retardation* are higher among delinquents than among non-delinquents (31, 52, 63, 96).

School. Although we have already discussed mental hygiene in several school situations (Chapter XIII), the subject of delinquency inevitably raises some of these questions anew. The Glueck study of 1,000 juvenile delinquents (52) found school situations to be of great significance. In fact, among the six factors deemed by them to be most significant in predicting unsuccessful outcomes were two having to do directly with the school—namely, conduct record in school and school retardation. It is not in place here to make detailed analyses of these factors. One wonders, however, how much attempt to study, understand, and help these 1,000 juvenile delinquents the schools were making while they were reporting "retardation" and "misconduct."

The Healy and Bronner study (59) gives the following comparisons of the delinquent cases and their non-delinquent siblings: "strong dislike for school"—delinquent, 40 per cent reported; non-delinquent, 4 per cent; "strong dislike for particular teacher"—delinquent, 13 per cent; non-delinquent, 0 per cent; "serious and repeated truants"—delinquent, 60 per cent; non-delinquent, 10 per cent occasionally. Cause and effect probably work to produce a vicious circle in these matters. The fact remains, however, that school problems are so inexorably bound up with delinquency in so many cases that very much closer affiliation between the schools and case-working agencies is definitely indicated. It is to be hoped that schools will rapidly avail themselves of the professionally trained school social workers who are prepared to be of service in this field.

In a fable in Chapter XIII, the writer expressed her feelings about some matters she thinks should be included in the school's curriculum. In connection with our present discussion, it may be pertinent to say that the prevention of juvenile delinquency should be more a problem of public education than is usually supposed. Our schools have succeeded wonderfully in reducing illiteracy and in promoting regard for health. By the same token, if and when they consider habit formation, character training, ethical principles, and mental hygiene as important as the three *R*'s, a long step will have been taken in reducing the reducible causes of delinquency.

Delinquency Areas

One reads much in the literature on juvenile delinquency about the effect of bad neighborhoods upon child behavior. Many cities have had spot maps made showing the areas having the greatest concentration of delinquency. Such studies have often brought to light factors operating in the neighborhood that needed radical treatment. Introduction of playgrounds in such districts has reduced delinquency to a very measurable degree (111). One hope as to recent housing projects is that the recreational facilities there provided will make desirable behavior easier to learn.

Conclusions as to causation. Two points of greatest significance must be considered in connection with the etiology of delinquency, even to the point of laborious repetition. The first of these is *influences within the home.* These influences have already been discussed again and again in these pages. Perhaps, however, they cannot be overemphasized. One is tempted to question whether health, school retardation, bad companions, lack of recreational facilities, or poverty would ever lead a child to delinquency *if* he had satisfying emotional relationships with parents who were intelligent and ethical. We must, of course, make allowance for the disturbing disease conditions from which some children suffer. These conditions may drive them into impulsive and uncontrollable behavior. Granted the absence of disease and granted the absence of feeble-mindedness in a child, would any child who had ethical, socially minded, affectionate, and understanding parents ever resort to delinquency for any considerable period of time? It is doubtful. Certainly the number of such cases would be small.

In *New Light on Delinquency and Its Treatment* (59), to which we have referred so frequently, we read again and again such expressions as "strongly sensed rejection"; "unhappiness about family disharmony"; "attempts to bolster up the ego"; "unsatisfying human relationships especially within the family"; "absence of ego-ideal"; "no strong emotional tie-up to anyone who presented a pattern of satisfactory social behavior"; "no affectional identification with one who seemed to him a good parent." What a wealth of insight such phrases give us about the emotional state of the delinquent child! Healy and Bronner conclude their discussion of causal factors by saying, ". . . seeking further it appears that at some varying distance upstream in the sequence of delinquent causation there are *almost always deeply felt discomforts arising from unsatisfying human relationships."* (Italics ours.) This was the one thing found which most significantly differentiated the delinquent and non-delinquent siblings. One child felt deprived, rejected, or emotionally unsatisfied, whereas the other did not. One does not hesitate to say that the *home* is by all odds the largest factor in causing or in preventing delinquency.

The other point of particular significance is that each case of delinquency usually arises from a *combination of causal factors.* Experience indicates that it is the rare case indeed in which one and only one factor is involved in the delinquent child's history. This is less true in those cases where the major pathological situation is the *home,* of course. Otherwise, one is likely to find a combination of low intelligence, bad companions, and unsatisfactory school adjustment; or, bad physical condition, high degree of suggestibility, bad companions; or, unethical example, head injury, and peculiar social conditions. In other words, the principle of *multiple causation* is an almost universal rule. When one hears of a child who is delinquent because of "very poor eyesight," or because of "badly diseased tonsils," or because of "pernicious moving pictures," or any other single factor, one suspects immediately that the child has been examined or treated by someone who has a *hobby* or a *pet aversion.* Human conduct and human motivation are so enormously complex that there are probably few cases where one cause and one alone is operative.

The experience of probation officers, social workers, clinical psychologists, and psychiatrists amply confirms both the findings and the pessimism of the studies to which we have already referred. We must face the fact that what we know about *causes* of juvenile delinquency far outruns what we know about *treatment.*

Motion Pictures, Radio, and Delinquency

One hears so many unverified statements as to the harmful effects of the cinema that a review of scientific findings seems necessary (45, 90, 94). In 1928, Healy and Bronner (58) felt that, among the 4,000 delinquents studied, moving pictures had had little to do with inducing delinquent tendencies. In only one per cent of their cases did they feel that the cause lay in that direction. Pernicious stories and unwholesome dime novels were thought to be much more influential in the production of delinquency. In 1936, Healy and Bronner (59) saw no reason to change their minds, since "only a few" of the delinquents under consideration "stated that they had derived ideas from gangster or other crime pictures upon which they definitely patterned their own delinquencies." Blumer and Hauser (94k), on the other hand, claim that personal interviews and autobiographies of a large number of grade school and high school children, young delinquents and ex-convicts, show 10 per cent of the males and 25 per cent of the females to have been greatly influenced toward delinquency by the movies. Where children's behavior can actually be shown to have been influenced deleteriously, it seems to be the *methods* used by criminals and by the ardent wooer which they imitate.

The outstanding feature in connection with the matter of moving pictures is the enormous attendance of children. Forman (45) shows that up to about 1933, of the 77,000,000 people who attended the movies weekly, more than one-third were children and that 11,000,000 of them were less than 14 years of age. All studies have shown that underprivileged children attend much more frequently than children from better homes. Not only do children go to the movies, but they also *stay,* sometimes for the entire afternoon or evening, or both. Now that there are children's programs on Saturday mornings in many places, it is not an uncommon thing for children to take a lunch, stay all morning, and on into the afternoon. This practice is deleterious if for no other reason than that it keeps children indoors and inactive too many hours at a time. It has been claimed by some that the darkness of the hall and the lateness of the hour after an evening performance are also conducive to undesirable activities.

The Payne Foundation (94), which has made the most exhaustive study of the movies to date, shows that, in 1920, 82 per cent of the cinema themes for that year concerned crime, sex, and love. By 1925, this percentage had dropped to 79 per cent; and in 1930, only 72 per cent of the content was estimated to be concerned with crime, sex, and love. The parts actually remembered by children as long as six weeks after the performance constituted about 90 per cent of what they had originally retained immediately following the performance. These studies also showed that, even aside from the trip to the movie, the effect of the movie itself was likely to be disturbing to sleep. Instruments were used by which to record pulse rate and other physiological processes during the picture. Exciting pictures were found to accelerate these processes considerably. Exactly what the effect of this excitement is upon health, probably no one knows.

One of the most significant features of the whole question of movies is the inordinate number of times that some individual children attend. This is perhaps to be regarded as an accompaniment of delinquency rather than as a cause. No doubt many children find in this way their chief means for withdrawal from reality. In the same way that excessive daydreaming tends to remove one from life's cares but to leave one's problems unsolved, so also may the behavior seen on the screen help the emotionally starved or disturbed child to find solace. Just what is the effect in producing and increasing unwholesome introversion in children we do not know. Excessive attendance may also induce stealing in order to secure "show fare."

Efforts are being made from several angles to popularize the better movies for children, to develop appreciation and techniques for evaluation of the content of movies, and to regulate the selection of movies shown in a particular neighborhood. Many of our better magazines attempt to rate pictures and to indicate ones suitable for children. Unfortunately, most of our delinquent children do not come from homes where such helps are appreciated or available. However, many children, both delinquent and otherwise, are subtly induced by their teachers to see certain desirable pictures that may be showing in the neighborhood. Some schools, institutions, recreation centers, and churches show such pictures free. Attempts to select or regulate the pictures shown locally, however, have so far not met with much success. Local theater managers may be glad enough to coöperate with Parent-Teacher Associations or with women's clubs in their efforts to have only certain pictures shown. The difficulty seems to lie in the fact that the local manager himself cannot, to any great extent, regulate selection since he is in many cases only an employee of the producer. Block-booking necessitates his taking whatever films are sent to him. Some neighborhoods have been more or less successful in "cleaning up" the movies through mass boycotts.

Another attempt to bring about improvement is the work of Motion Picture Producers and Distributors of America, the Cinema Appreciation League, the National Council of Teachers of English, and many libraries and schools. Children are given supplementary readings to aid them in interpreting historical plots, and much English classwork is based on good current movies. Lectures, courses, and institutes dealing with techniques and methods of motion-picture appreciation are developing. Also, in some places, courses are being offered for students desiring to learn how to write script both for juvenile movies and radio programs. Among agencies sponsoring such activities are the Advisory Board of the Motion Picture Committee of the Department of Secondary Education, Educational and Recreational Guides, Inc., and Finer Films Federation of New Jersey (1, 90, 94).

Great as the appeal of pictures is, and bad as many of them are, so far as delinquency *per se* is concerned, there are other matters over which we should become more concerned. As Healy and Bronner (59) say, "If even a small percentage of those who saw stories of crime in the movies or of those who read 'pulp magazine' accounts of criminals were delinquents, the statistics for juvenile delinquency would be a hundredfold what they are."

In evaluating the effect of the movies (38, 90), there are certain psychological principles which must be remembered. Frequent repetition of visual representation of criminal acts may tend in time to lessen the original horror which the spectator experiences. Furthermore, it is true that emotionally toned "images," whether created by photographs, pictures in magazines, or by motion pictures can, figuratively speaking, be carried around in the mind and revived at will. These facts help to explain the long-recognized potency of pictures, stories, and storytelling in the creation of either desirable or undesirable attitudes. It is only to be expected, then, that such studies as that of Peterson and Thurstone (94g) would show that attitudes may be very greatly influenced by the content of motion pictures.

The sponsors of some *radio* programs for children have employed psychologists to check all the script used for their programs. These psychologists insist that, on the children's programs for which they are responsible, the story must be plausible; the characters must be reasonably lifelike; misbehavior, misconduct, or crime must never be portrayed with a halo or be allowed to emerge victorious or triumphant; and that, when thrill and excitement are introduced, the dilemma, problem, or critical situation must be solved before the program ends so that the child is not left hanging in mid-air, so to speak, until the following installment comes over the air (38).

Companionship and Recreation

It is scarcely necessary to quote research studies as to the effect of bad companionship and the lack of adequate recreational facilities in producing delinquency. The more critical point would seem to be what to do about it. Companionship, as parents and social workers know, is one of the most difficult and subtle factors in the life of a child so far as regulation and supervision are concerned. Children, like adults, choose their friends partly upon the basis of propinquity and partly upon the basis of an individual and personal preference that defies analysis. One might as well tell a child that he *should* like spinach as to tell him that he *should* (or *should not*) like a certain child. If a child is getting what he needs and likes, good or bad, from another child, the ingenuity of the adult is usually not sufficient to lead the child to break off his companionship. Community of interest and of intelligence, as well as of age and size, are factors determining friendships. Race, color, and economic status play no part in children's selection of friends until after social training and experience have intervened.

Much has been said and written about the merit of organizing and rehabilitating "gangs" for social purposes (103). The effectiveness of such a procedure is too often more theoretical than real. It is true, of course, that sometimes the leader of a gang *may* be reached through the good offices of a successful probation officer or case worker. In such a case, the "reformed" gang leader may be able to do with and for his gang cohorts what adults had failed to do. The fact remains, however, that so far as correcting delinquency is concerned, such cases are much too infrequent to offer a solution to the problem. Social workers, particularly in juvenile courts, are, nevertheless, always interested in the gang activities of their wards. Even the name adopted by a gang is, in many instances, significant of the felt needs or desires and ambitions of its members. If such clues offer any help in providing more wholesome possibilities of achievement, we shall be interested in utilizing them even though the gross numbers of delinquencies are not greatly reduced thereby (125, 126).

Supervised playgrounds and other recreational centers often provide the only wholesome opportunity for play and coöperative games which some children have. The reduction of delinquency by the introduction of such facilities has not proved to be as great as was expected in the early days of our interest in such services. At least two negative factors must be recognized. One is that very often recreation centers or settlement houses either do not appeal to the delinquent child, or for some reason may even be anathema to him. To the child who has no physical skills, is very shy, is conscious of poor clothes or lack of money, a recreation center may seem only another source of discomfort and embarrassment. The child who has already begun to derive his thrills from adventurous unsocial conduct may think the playground, settlement house, or Y.M.C.A. tame indeed. Trying too hard to prevail upon such a child to go to any of these places may only antagonize him and block our other efforts with him. Furthermore, much as one may hesitate or dislike to believe it, the fact remains that individual case histories sometimes show that Y.M.C.A. playrooms or other similar places have been used by delinquent children for the purpose of talking over and planning further delinquencies. One must be careful not to give the impression that such is always or even often the case, but there can be no doubt that it does occur.

Fortunately, professional *group work* techniques are coming to our aid in our efforts to rehabilitate problem children. A group worker, trained in most recent developments and methods, observes and reports upon the behavior of the individual while he is a member of a group. Thus it happens that a good group worker is able, while watching a group around a game table, on a dance floor, or in a workshop, to note social and emotional reactions of individuals. Much that is enlightening in explaining a child's behavior can be gleaned through such observations. The possibilities of help for maladjusted individuals through such means have not been sufficiently recognized until comparatively recently.

Stealing

Because stealing is the charge in such a large number of cases of juvenile delinquency, it shall be given special consideration (128). It should be understood that much that the layman calls "stealing" the psychologist does not so designate. The writer once knew of a four-year-old who picked all the pennies out of the pocketbook of a caller in the home. When the child came into the house with chocolate candy smeared all over her face, inquiry was started as to the source of her funds. It developed that the child *had* taken the pennies; she explained her behavior by saying that "pennies aren't money." It seems that her father had been in the habit of pulling the change out of his pockets when he came home in the evenings. He would then flip out all the pennies for the four-year-old. She had some reason, therefore, for thinking that adults do not want pennies or that pennies do not belong in adult pocketbooks with other money. Such youthful ignorance and innocence are not as a rule, however, the cause of most of the stealing with which social workers have to deal. Children also have to learn that food, soap, medicine, and certain other supplies belong to all the family, but that some things belong only to individuals. Such learning is particularly difficult for the child who has no individual belongings of his own or who has no place to keep them inviolate if he does have any. It must be very hard indeed to learn to distinguish between "what is mine and what is thine" when there is nothing that *is* exclusively *mine.*

As for the stealing which finds its way into courts and social agencies, Kanner's (67) classification is worthy of note: "intelligent and unintelligent stealing"; "casual and habitual stealing"; "selective and indiscriminate stealing"; and "solitary and group stealing." A comparison of examples of these various kinds of stealing will show that the value of the article stolen or even the frequency of theft may or may not be an index to the seriousness of the condition. *Unintelligent stealing,* with no consistent motivation, no regard for caution, no preference for obtaining satisfaction legitimately, is usually a symptom of a more serious malady of an emotional nature. *Habitual stealing* likewise presents therapeutic difficulties that are not inherent in the occasional stealing that may result from a particularly strong temptation. In this connection, it should be realized that the habit of stealing bears this resemblance to other habits—namely, that even after the original cause or motivating factor may have been discovered and removed, the well-established habit will probably not disappear immediately. Lapses and recurrences in stealing somehow seem so much harder to understand than similar lapses in bed-wetting or lying. *Indiscriminate stealing* is usually harder to account for, if not to cure, than the selective stealing, which tells its own story in the very articles stolen. *Group stealing* requires a different kind of study and case analysis than individual or solitary stealing.

One of the commonest types of stealing encountered in children is that motivated by the child's desire for some particular pleasure or object. Bicycles, guns, roller skates, and jewelry seem to have a particular appeal. Money for candy, for notebooks required by the school, for the school savings account, for a movie, or for clothes or adornments such as other children have may seem so necessary to the child that he sees no way but to steal. Where children have no allowance or receive no spending money whatsoever, the wonder is that they do not steal more often than they do. Sometimes the friendship of other children is so coveted that a child may steal objects to give away in order to *buy* friendships. The runaway child likewise may actually have to steal in order to provide for his necessities while in hiding or while away from home. All such cases as those just enumerated seem to suggest that prevention is indicated rather than treatment. *Removal of necessity* may, and often does, result in the cessation of stealing.

There is no way of knowing the number of children charged with stealing who are simply doing away from home what they hear discussed and condoned in their own homes. The child who is praised for bringing home coal which he has stolen from freight cars may be the same child who steals a bottle of milk from the neighbor's doorstep, ice from the ice wagon, fruit from the fruit stand, or a sweater from the bargain basement.

Certain other examples of stealing are neither so easily understood, diagnosed, nor cured. Study of child psychology and child psychiatry has shown us that stealing may be a symptom of emotional difficulties that on the surface would appear to have no connection whatsoever with stealing. For example, the child who steals only from his own family may be striving, in a way not clear even to himself, to relieve his affectional starvation, his sense of family rejection, his jealousy, his desire for revenge, or his fear and insecurity. Likewise, the child who steals from many persons indiscriminately and with no reason which he can articulate himself is likely to be the child who has suffered so much from so many different sources that his frustration and agony prompt him to do the erratic, but, to him, the satisfying, thing. He may be actually trying to punish an individual, or all individuals, or he may simply be struggling to do something—anything—that will somehow or other relieve his feelings. These children present a serious problem. Their unhappiness is likely to be so great that our therapeutic skills do not begin to keep up with our desire to help. Psychiatric or psychological help is usually needed with such cases. Some of the discussion on ways of discovering children's emotional difficulties (Chapter X) may be found helpful.

The influence of companions and gangs is of importance in a consideration of stealing. A child may be "scared to death" while, and after, stealing. If, however, his act is interpreted by his peers as bravery, as being "he-mannish" or bold, this may far outweigh his own fright. Most of us are willing to endure a certain amount of suffering if by so doing we get a social reward from those we wish to please. Within limits, of course, the very *scare* itself may not be entirely unpleasant, for it is connected with thrill and adventure. Some gangs require that an initiate produce something he has stolen before he can be received into full membership. Often, of course, this is mere self-protection on the part of members of the gang, since they will have less reason to fear betrayal or exposure by anyone who has committed the same offense himself.

In our discussion of sex (Chapter XI), we saw that the powerful stimulation of aroused sex feelings may spread to other accompanying activities and thus set up a kind of conditioning. Stealing may thus come to be used by the pubertal or adolescent child as a release for sexual discomfort. Individual case histories sometimes indicate, too, that children who may be worrying about masturbation may steal, or do *anything,* that for the time being gets their mind away from their fear about masturbation. While kleptomania scarcely belongs in *juvenile* delinquency, it is of interest here inasmuch as kleptomania can, in many instances, be explained only upon a basis of sex. Many women kleptomaniacs, for example, relate that the urge to steal is much stronger at certain points in the menstrual cycle. Kleptomaniacs, while undergoing treatment, often report that the satisfaction that comes from stealing is a sexual satisfaction. In adults the object stolen may be a fetish or love-object. Kanner (67) feels that such behavior, however, does not "assume pathological significance below the age of adolescence." Where there is reason to suspect that a child's stealing is connected with his sex life, very careful psychological or psychiatric examination and treatment are necessary.

A mother recently called the writer by telephone. She asked for an appointment to get help on a problem about her fourteen-year-old boy. Further discussion revealed the fact that the mother was terribly troubled by the fact that her boy had been stealing—and stealing nothing but women's underwear. The mother was advised to consult a psychiatrist who later told the writer that the stealing was definitely tied up with a very badly confused sex pattern in the boy which he was very doubtful of helping.

A certain amount of juvenile theft is attributable to disease entities and the sequelae of disease. Some of the hysterical conditions occasionally found in children, amnesic fugues, and sequelae of encephalitis and epileptic deterioration must be reckoned with by the physician who is helping with such cases.

Since the causal factors in stealing are so varied, it is obvious that no panacea can be offered. Handling and treatment will, of course, depend upon the motivating factors in each individual instance. At least it is hoped that we have long since learned better than merely to punish for stealing before we have found out, if possible, the conditions responsible.

Running Away

It is a common saying among physicians that certain disease conditions are always, to them individually, more baffling than others and that they always feel incompetent and fearful in the presence of these pet difficulties. To the writer, a child's chronic running away from home has always presented just such a situation. One can see that in stealing, once the act is actually committed, a large part of the fear is over. The fear of detection is likely to fade after the act has actually been committed. With runaways, on the other hand, the insecurity, the actual physical suffering in many cases, and the fear of being apprehended, in many cases, do *not* decrease with time. At any rate, it is fairly clear that, for the child who is willing to brave all the insecurities involved in running away from home, there must be a very powerful need for satisfaction of some kind. This must be reckoned with before help can be given (7, 93).

Within recent years the problem of runaway children has assumed a social importance never before reached. According to Kanner (67), about 200,000 boys took to the road during the two years preceding the publication of his book in 1935. One of the difficulties in handling runaway children is the misguided kindness of the public in giving aid to these children. The White House Conference (138) reports that in Pittsburgh nearly 900 children between 13 and 15 years of age ran away from home in 1926. "Most of these were reported to have been assisted by good-natured but thoughtless motorists."

The commonest factor of major significance in the case of children who run away from home is something in the home situation itself.

All the emotional factors arising in home situations, which have been referred to again and again throughout our discussion, may and often do activate running away. Fear of the consequences of a bad school report; fear of punishment; anxiety about drunkenness in some member of the family; fear and irritation over family quarrels; feelings of rejection; jealousy and feelings of inferiority, all play their devastating part in making things unbearable in some homes. No doubt the uncertainty engendered by tension during periods of economic depression has driven many a child to run away. While perhaps not of statistical significance, it is of importance in individual cases to know that children have sometimes been so tortured by uncertainty about their parentage that they have felt obliged to run away from home.

In all the cases of runaway children so far mentioned, the child at least knows that he *is* running away and may have a more or less well-thought-out reason for so doing. That still leaves a second group of runaway children who really do not know why they run away and a third group who do not even realize that they are running away. The line between these two groups is not sharp. An example of the first class is the child who feels an urge to wander, to get away from monotony, to get a little excitement, or to avoid unpleasant routine imposed by the home or the school. Such a child may, in seeking his satisfactions, wander farther than even he himself had any intention of doing. The author well remembers a tiny, chronic runaway girl whose only explanation always was: "I don't know. I just felt a 'walkin' spell' comin' on." She undoubtedly bore close resemblance to the children in the next group of runaways.

The other type of runaway child is the baffling case where we need all the help that psychiatry and pediatrics can give us. Long-time study of runaway children leads to the conclusion that many of them become the psychopathic personalities who meet adult life situations no more constructively than their early running-away conduct would have seemed to predicate. Many of them, as subsequent history shows, are early schizophrenics. Some are neurotics, and some are sufferers from hysterical and amnesic fugues; others are epileptic, paretic, or encephalitic.

Fire-Setting

Fire-setting is a most disturbing delinquency that often has very serious consequences. The pyromaniac knows perfectly well what he is doing when he sets fire to something, but seems utterly unable to control his own conduct. Often such a person has a kind of ritual about his fire-setting or at least he may always set fire to the same kind of thing. The emotional dynamic of pyromania is often very obscure. In every case it appears to be connected with some inner conflict or anxiety for which the setting of the fire and watching it burn offers an emotional release. In such cases the psychotherapy is directed against the cause of the conflict rather than against fire-setting *per se* (108).

Other Delinquencies

In nothing less than a text on juvenile delinquency could all types of erratic behavior be discussed. Wanton destruction, bullying, gambling, disobedience, assault, pathological lying (120), and other offenses must be studied for causal factors, just as the two more frequent offenses of stealing and running away. Sex behavior has already been discussed in Chapter XI. For further discussion the reader is referred to the following references: 4, 24, 25, 28, 32, 36, 52, 55, 56, 63, 86, 98, 115.

Juvenile Courts

In 1899, Illinois passed the first juvenile-court law and established the first official juvenile court in this country. Much water has gone under the bridge in the intervening fifty years. The public has accepted the idea of separate courts for children. Laws have been modified accordingly. Interest in the election of qualified judges to serve for a long term, rather than rotating services with judges from other benches, has come about in many places. Courts have allied themselves with, or established their own, medical, psychological, and psychiatric services. Good working relations with schools and social agencies have been established. Surely these gains have improved the status of children in our country (1, 3, 19, 43, 73, 74, 130, 131, 132, 143, 146).

All these benefits have been brought about at a considerable expense. Even casual observation, to say nothing of some of the research studies already cited, shows we are still far from an adequate answer to the problem of either prevention or treatment of juvenile delinquency. In evaluating statistical outcomes, we must keep two things in mind, however. For one thing, the case load in the average juvenile court of the past was likely to be too large for adequate individual treatment. This condition is changing in our better courts now. Another matter must not be lost sight of. In the past, in many communities there was a definite desire on the part of interested adults to prevent a child's name from ever getting onto the rolls of a court. A court record gave a child a serious social stigma. For this reason, only the most difficult cases, or the cases upon whom everyone else had failed, were referred to the court. Obviously this reduced the percentage of "successful outcomes." To be too greatly disturbed over this may be like being disturbed over the "high death rate" in hospitals. We have to keep in mind that in both instances the worst cases are those likely to be referred.

It seems to be generally conceded that only a small percentage of cases referred to juvenile courts actually require *legal* action. The question arises then: Is the juvenile court the place to handle children's cases which do not involve commitments or other legal actions? New York City is trying the experiment of referring more and more of the children appearing at the intake department of the New York City Children's Court to other social agencies and fewer and fewer to the judge. It is scarcely the prerogative of a psychologist to say along what lines the juvenile court of the future will develop. Two things, however, do seem clear. One is that undoubtedly, for the *treatment* of some delinquent children, the factor of authority inherent in the court is in itself a therapeutic measure. The other is that we must, through interpretation and education, rid society of its destructive, negative attitudes about wards of the court.

Many of our better juvenile courts are beginning to question whether rehabilitation can be brought about to the degree we desire by means of the court facilities alone. Do we need rather treatment-schools or residential psychiatric centers? This matter has already been discussed in another connection. Undoubtedly the time will come when society will see that, even though such psychotherapy is expensive in the first instance, the ultimate saving will well justify the procedure.

Institutions for Delinquents

The matter of institutionalization of children has been discussed at greater length in Chapter VIII. Mention must be made at this point, however, of the institutional treatment for delinquents (1, 9, 17, 33, 40, 53, 54, 93, 101, 103). The pessimistic findings of Bowler and Bloodgood (17) relative to the later careers of boys submitted to correctional institution care have already been mentioned. Certainly if adequate correctional and therapeutic measures are lacking in clinics and case work agencies, it is scarcely to be expected that *institutions* will be in any better position to give successful treatment. Furthermore, institutions suffer from several handicaps inherent in their situation. Where large numbers of children are being cared for, it is obviously very difficult to individualize programs, curricula, and treatment plans. In addition, lack of adequate institutional planning in most states makes classification of children as to intelligence, mental health, or seriousness of delinquency impossible. As a result, most institutions for delinquents are called upon to adjust to all varieties of intellectual and social deviations. Furthermore, institutions for delinquents can scarcely escape what Healy and Bronner (59) call "delinquent contagion." Undoubtedly many a delinquent learns more about delinquency in the institution or detention home to which he is sent for care than he knew before he was committed. One further handicap under which institutions must work is the fact that life there is inevitably very unlike the life to which the delinquent must return upon release. Most institutions are in rural settings quite different from the crowded city districts from which most delinquents come and to which they usually return. Even the household skills and the assigned chores within the institution depend upon supervision and equipment which the delinquent may never have again.

Foster Homes

Much of what has just been said relative to the inadequacies of correctional institutions may with equal justice be said of foster homes (see Chapter VIII). While awaiting improved techniques and procedures for dealing with delinquency, we shall continue to use correctional institutions and foster homes for children from whom society must be protected, for children for whom we have no place particularly suited, and for children with whom, in our ignorance, we do not know what else to do. Success of such treatment will continue to depend upon adequate diagnosis of the child's problem before placement and appropriate placement subsequently.

Prediction of Outcome for Juvenile Delinquents

Reference must be made again to the study by the Gluecks (52) and that by Healy and Bronner (59) as to outcomes of treatment. One of the chief contributions of these two works is that they give us statistics on carefully studied cases, and from these statistics we can predict outcomes with more accuracy. In order to compare the predictions of the Gluecks with those of Healy and Bronner, the former are given here in terms of *least favorable factors* as regards outcome. The methodology by which the Gluecks derived their prediction table cannot be discussed here. Suffice it to say that they found the following factors (paraphrased) to be of greatest significance in predicting unfavorable outcomes of treatment for individual juvenile delinquents: discipline by father, poor; record of school misconduct; first delinquency before 15 or 16 years of age; discipline by mother, poor; more than a year between onset of delinquency and beginning of clinical care; history of mental disease or defect in the family; school retardation. The converse of all these factors made prediction of success possible. In addition they found success quite likely under supervision of certain probation officers.

It will be recalled that Healy and Bronner placed 18 per cent of their cases in Group I—"those delinquents who cannot be considered hopeful for treatment under even ordinarily good conditions of family and community life." This group included delinquents who were defective mentally; those with brain injury; postencephalitics; confirmed homosexuals; psychotics or prepsychotics; severe cases of neuroses; and "neurotic characters." Thirty-five per cent were in their Group II—"those cases in which the social pathology, particularly as involving human relationships within or outside the family circle, appears to weigh so heavily against the possibility of successful treatment of the delinquent in his family environment that the given situation seems largely hopeless."[4] The family picture of this group included psychoses, alcoholism, abnormal or severely psychoneurotic personalities; definite immorality; mental defect; crime; dire poverty; social pathology in relationships outside the family circle. It is highly significant that the factors involved in the largest group (Group II), for whom Healy and Bronner predict unlikelihood of successful outcome, so largely coincide with the first seven unfavorable factors cited by the Gluecks.

By combining and paraphrasing these two lists of predictive factors, we might say that the chances of successful outcome of treatment of juvenile delinquents become *less* the more the following factors are found to be operative in any given case: mental defect, brain pathology, disease entities, neurotic or psychoneurotic tendencies in the child himself; history of mental disease or mental defect in the family; poor relationships within the family; social pathology (alcoholism, dire poverty, crime, and the like) in the home; early age at onset of delinquency; poor school record as to conduct and progress; length of time after onset of delinquency before treatment is instituted. It is important to notice the large number of these factors which have their roots, directly or indirectly, in the *home*.

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[4] This and other quotations from Healy and Bronner's *New Light on Delinquency and Its Treatment* are made with permission of Yale University Press, publishers.

Conclusions

Overcome as we are likely to be with the enormity of the problem of juvenile delinquency, nevertheless there are certain high points in the mass of factual matter that cannot escape our attention. The first of these is the *essential unitary nature of the causes of delinquency.* Leaving out of account the relatively small percentage of cases where delinquent behavior is caused by impulses and disease sequelae which render the child unable to exercise any control over his conduct, we find that otherwise the delinquent conduct of a child is simply his way of gaining satisfactions or of avoiding annoyances. To him it is logical, rational, or necessary. Delinquent conduct is his way of satisfying desires for which he knows no more adequate method. The clue to therapeutic planning, where there is any, lies at this point.

A second principle emerging from experience, as well as from study, is that most conduct, both delinquent and otherwise, is the result of *multiple causation.* Rarely do we find delinquent children whose conduct can be explained on the basis of a single causative factor. Perhaps a large amount of our failure in the past has been due to our belief that, by correcting or treating some one feature that may have been a hobby of ours or the fad of current psychological and social thinking, we would bring about reform. There are, of course, cases where many favorable factors exist, but where there are also a few unfavorable ones about which we may be able to do something. Unfortunately, these are not as a rule the cases which protective agencies or probation officers meet.

A third fact worthy of note is what might, with reservations, be called the *difference between the sociological and the psychological or case-work approach to delinquency.* The statistics of the present chapter might be called sociological data. They are not encouraging. We need still further help from the sociologist to show us wherein we have failed. As psychologists and case workers, however, we shall also contribute what we can from our experience as to possibilities of improving services in the field of delinquency. Essentially, however, we shall continue to work with *individual children.* On the daily job, it matters little to us whether the percentage of delinquency caused by broken homes be small or large if the *particular child* with whom we happen to be working is known by us to be suffering because of broken home ties. We shall continue to take *that child as he is,* regardless of whether he fits into the middle fifty per cent of cases or whether he is in the last one per cent. The help given by a well-trained probation officer, school social worker, or clinician to a child misbehaving because he is suffering will still be worth while even if total figures on final successful outcome are small.

Finally, it should be obvious to all that, if we are to reduce delinquency, *the critical point of attack is the home.* It is scarcely the business of the psychologist to say whether reform at this point shall be brought about by preparental education, by parent education, or by limitation of birth of children to only those parents able and anxious to rear children, or by a combination of these methods. Healy and Bronner (59) believe that "the single direct attack of greatest value may be through widespread parental education—to be sure not an easy task." Perhaps it might be said, in the face of so much failure, that the greatest contribution to a program of prevention of juvenile delinquency thus far is the clear realization that the home and home relationships are the matters of greatest concern for further progress.

Sociologists, psychologists, and professional workers agree with the philosophy expressed in the *Children's Charter* (138) as regards the delinquent child[5]:

> For every child who is in conflict with society the right to be dealt with intelligently as society's charge, not society's outcast; with the home, the school, the church, the court and the institution when needed, shaped to return him whenever possible to the normal stream of life.

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Chapter XV

PSYCHOLOGICAL AND SOCIAL PROBLEMS INCIDENT TO CERTAIN DISEASES OF CHILDREN

Introduction

If psychology ever needed justification for browsing around somewhat in the field of disease, it finds such in the current interest in so-called psychosomatic medicine (94), in which the reciprocal relationship between mind and body is being emphasized. The increasing adult mortality rate from cardiac diseases, for example, raises interesting questions about the emotional life of these subjects. Emotion produces tension and high blood pressure. On the other hand, high blood pressure itself is not conducive to emotional poise. In the field of child psychology, as we shall see, there are complicated and sometimes baffling interrelationships between emotional health and physical health.

Allergies

One of the commonest of the psychosomatic relationships involves the allergies. An allergy is an unusual sensitivity and unusual reaction to substances to which people ordinarily are not sensitive and do not respond with illness. This peculiar susceptibility involves psychogenic factors. To take an extreme example, it is not uncommon to find in the history of mentally ill persons an unusually large spotting in the family history of asthma, hay fever, eczema, susceptibility to colds, and nervous indigestion. It is needless to say that no one of these conditions alone is an indication of mental illness.

If the sensitivity is in the nose, the allergic child responds with hay fever, rose fever, or the like. If the sensitivity is in the bronchial passages, the allergic child is asthmatic; if in the skin, he suffers from eczema; and so on. As Breckenridge and Vincent caution (14), it is necessary for adults charged with child care to "differentiate between real physiological allergies and 'psychological allergies' used as devices to evade unpleasant experiences."

Asthma is such a common and such a distressing condition that anyone caring for an afflicted child would do well to avail himself of at least some of the voluminous literature in this field. Hurst, for example, stresses the role of expectancy in producing an asthmatic attack and urges that fear and anxiety be reduced in both child and parents (40). Other helpful suggestions will be found in Brown and Goitein (16), Stokes and Beerman (86), and Vaughn (93).

Prevention and Immunization

In intelligent groups today one no longer hears the old adage, "You might as well let him have the childhood diseases and get them over with before he starts to school." We see too many cases of encephalitis following measles to take any chances on measles; we know of too many serious aftermaths of whooping cough to run any risks that can possibly be avoided. In fact, modern medicine concerns itself as much about prevention of disease as about cure of disease (1). It is not in place here to say what or when immunizations against smallpox, diphtheria, scarlet fever, and whooping cough shall be administered. Toomey (91) gives a valuable résumé of these procedures. It is our business, however, to acquaint parents with the necessity of getting advice from the family physician about how early immunization should be begun and how followed through.

A few references from current literature will suggest many other matters of health that are of great interest to professional workers. Urban (92) discusses the relation between communicable disease, on the one hand, and behavior and learning, on the other hand, in high school students. Pearson (72) points out the effects of operations on the emotional life of children. It is curious how little emphasis has been put upon this fact. Bakwin (7) describes high fevers that develop in infants who are admitted to hospitals and that subside when the infant is taken home. McCulloch (60) devotes 55 pages to a review of pediatric publications for the year 1942-1943 alone.

Epidemic Encephalitis

Nature of the disease. In 1917, Von Economo presented a paper in Vienna in which he gave case reports of *epidemic encephalitis.* Prior to that time, while there had evidently been cases which would now be diagnosed as encephalitis, no real study had been made of the disease. In the first quarter of the twentieth century, different European countries had more or less serious epidemics of a disease in which extreme lethargy and sleepiness were prominent features. In 1918 the epidemic reached the United States. Because of a concurrence of this epidemic and an epidemic of influenza, confusion as to diagnosis and etiology arose. On the one hand, it was thought for a time that encephalitis was a condition brought about by the same organism or the same virus that produced influenza; on the other hand, mild cases of encephalitis were, and for that matter may still be, confused with influenza, with consequent erroneous diagnosis, prognosis, and treatment. As a matter of fact, many children who by later developments appear certain to have had encephalitis at one time were never so diagnosed during any acute illness. The tragedy of this fact will be discussed later.

Encephalitis is known by several different names. It is spoken of as *sleeping sickness* or *encephalitis lethargica.* This terminology is not without fault. For one thing, it suggests the African sleeping sickness which is caused by the bite of a fly and with which it has no etiological or prognostic relationship. Furthermore, while unusual amounts of sleep may be characteristic of encephalitis lethargica, such is not always the case. Authorities seem now to prefer the term *epidemic encephalitis.* Even this designation is not above criticism, since there are apparently sporadic cases that do not depend upon epidemic conditions (79). It is said that St. Louis, Missouri, has cases reported almost every year, although the serious St. Louis epidemic was in 1933 (65). Most cases have been reported for the winter and early spring months except those of the St. Louis epidemic, which occurred during the summer.

The cause of encephalitis lethargica is not definitely known, although some of the most recent researches seem to indicate that a filterable virus rather than a bacterium is responsible. Questions relative to the possibility of transmission are still under investigation and do not properly belong to the present discussion (58, 59).

Diagnosis. The symptom picture and diagnosis of encephalitis are, of course, medical matters. Particularly for public health nurses, however, a superficial knowledge of symptomatology is necessary, inasmuch as parents often make the mistake of thinking their encephalitic child merely has a mild influenza, is "just sleepy," or has a "head cold." If the child does not appear to be very sick, medical aid may not be sought unless the public health nurse or other professional visitor insists upon it. In mild cases, diagnosis is likely to be very difficult, since the disease resembles so many other diseases in many respects (45). Indeed, physicians have in certain cases made a diagnosis of encephalitis after the acute illness had passed, basing their judgment upon sequelae rather than upon symptoms. Certain tests now being experimented with may eventually dispel any diagnostic confusion, however. Among the common, but by no means universal, symptoms are fever, drowsiness, ocular disturbances (particularly diplopia or double vision). The onset may be sudden or it may be preceded by pains and aches in various parts of the body, fatigue, and irritability. In some cases, instead of sleepiness there may be a complete reversal of the sleep curve, the child being overactive at night and sleepy in the daytime. Following the acute illness, this symptom becomes a matter of great concern in the care of the afflicted child. He may wander around the house all night long, unable to sleep himself and not permitting anyone else to do so. Overtalkativeness sometimes is also a part of the picture, in which case the child apparently cannot stop talking. One of the common features of the disease, rather more common in older children, adolescents, and adults, is *Parkinson's syndrome* or the *Parkinsonian mask*. In this condition the face has a masklike, immobile appearance with little change of expression; movement of the body and of the extremities is noticeably slow; rhythmic tremors occur; speech is slow and monotonous; the arms do not swing; there is a tendency to run forward or backward; and extreme salivation and drooling are present. Torticollis or wryneck, frequent spitting, overactivity, puffing or spasmodic kind of breathing, tics, and choreic movements are common features of encephalitis likewise (69, 97).

Intellectual and character changes. Emotional disturbances are a frequent accompaniment of encephalitis (28, 79). Extreme irritability; behavior that may be either highly affective or apparently lacking in affect; excitability; violent temper; and aggressive attack are common. Sometimes one sees postencephalitic cases that are morbid and depressed. Experience with such children and the reading of case histories from the experience of others almost tempt one to say that the effect of encephalitis is to change the disposition and personality make-up to the opposite of whatever it was before the illness. Such a generalization is, of course, not wise. However, some children who were irritable and hard to control before their illness have been very docile afterward. Unfortunately, most of the case histories show changes in the other direction.

It is in the effects of encephalitis upon intelligence and behavior that the psychologist, school social worker, and probation officer are professionally interested. Authorities do not agree as to the percentage of cases in which mental deterioration follows encephalitis (15, 17, 18, 21, 37, 38, 45, 56, 79). There is reason to believe, however, that arrest of development is almost inevitable when the affliction has occurred during the first three to five years of life. In older children the effects are likely to be less in the nature of mental deterioration and more in the nature of character and personality change.

As to behavior disorders, the results of encephalitis are likely to be quite disastrous. Just what percentage of serious problem behavior and delinquent behavior encountered in children can be attributed to encephalitis we do not know. As methods of diagnosis improve, more adequate data on this point will be forthcoming. At present it is certain that many children with serious behavior problems were victims of the disease even though they may not have been so diagnosed at the time of their illness. The writer well remembers her first encounter with what is undoubtedly an example of postencephalitic behavior, although no diagnosis of encephalitis had at that time been made. The mother of an eight-year-old girl came to the office in great perturbation. The police, she said, had just called her to say that they did not object to hunting lost children, but that they could no longer afford to spend ten to twelve hours a day two or three or even four times a week, as they had been doing, to hunt her child. The mother reported that the child's running off had become so serious that she, in desperation, had resorted to tying the child in a rocking chair on the third floor. Usually when the child was finally found after her escapes, she would be roaming through the woods on the hills back of the river along which the family lived. Since paths through these woods were frequented by factory employees going to and from work, the situation was quite alarming. (A psychoanalytic friend of the writer suggested immediately that since the child ran to the "hills," she was "trying to find her mother's breasts" and asked what the conditions of weaning had been. The fact that a child in that particular town, if she ran any place, *had* to run either to the hills or into the river weighed not at all against the history that the child had been "sick with a high fever" at about three months of age and had to be weaned and hospitalized.) Regardless of theory, where the child ran seemed to offer no clue as to causation or motivation in this case. Furthermore, there were other serious behavior disorders that came to light as investigation proceeded. The child would, on every possible occasion, empty into a common vessel all containers of salt and pepper. She would mix these two ingredients and then refill the salt and pepper shakers with the mixture. Very frequently she would go out to wade in a creek flowing past the house. As soon as her feet were wet, she would sit down in the water, take off her shoes and stockings, and watch them float down the creek and on into the river. All this irrational behavior occurred in spite of an intelligence quotient of 108. An investigation of hospital records of the illness when the child was an infant showed that no diagnosis had been made at that time. When the physician who had attended her was interviewed, some eight years later, he said he thought she *might* have had encephalitis. He remembered she had run a very high fever and had slept a great deal.

In spite of plans for hospitalization to provide for observation, which were explained by the psychologist and apparently accepted by the mother, actually nothing was ever done. No amount of interpretation could convince the mother that the problem was anything that she would not be able to handle herself at home. She was unwilling to accept the fact that behavior disorders often have their roots in neurological disorders. After attempts at medical observation had to be abandoned, nothing more was heard from the case for about 12 years. At that time, the physician of a city poor farm called the writer to get what information she had on the case. The girl, then almost 20, had been found wandering around on the bedroom floors of downtown hotels and spending the night in railroad stations. She had been picked up by the police. There were no charges of serious delinquency against her, but one could recognize that the girl was, to say the least, in danger of someone else's delinquency. She had finally been institutionalized because of her utter inability to adjust to life in a city environment and because of very manifest deterioration. The institution diagnosis was "probable postencephalitis." Whether the city poor farm is the place for her institutionalization might be questioned. The fact remains, however, that most communities do not have sufficient institutions to permit very much specialization in intake. Such cases as this, undiagnosed at the time of illness, are less likely to occur now than they were when this case was first seen. It is from experience with just such cases as this, however, that physicians have come to *suspect* encephalitis even when the whole typical syndrome is not manifest.

The behavior disorders of postencephalitic children are well described by Louttit (56), Stryker (87), Kanner (45), Holt (38), Scheidemann (79), Cole (22), Molitch (67), Jenkins and Ackerson (41), Matheson Commission (58, 59), Ebaugh (28), and Bond, Appel, and others (10, 11). The behavior aberrations may be so serious as to make it impossible to keep the child in school. In some cases, the attempts of the family to manage the child have been little short of disastrous to all concerned. Failure to agree upon disciplinary measures has, in some cases, made for great marital discord. Obviously, for behavior which is so erratic, compulsive, and irrational, punishment is of no avail. Fighting, lying, stealing (but giving away much of what they steal), playing truant, running away from home, unaccountable stubbornness, destructiveness, and all the rest of the categories of juvenile delinquencies may be committed by postencephalitic children. Here again, generalizations may be hazardous, for undoubtedly the effects of encephalitis upon moral behavior are more serious in some children than in others.

Treatment and handling. All authorities seem to agree that there is no specific medication for encephalitis. The question becomes one of care and handling rather than of medical treatment. Perhaps the most significant study of this matter is that by Bond, Appel, and Smith of the University of Pennsylvania Hospital School (Franklin School) (3, 10, 11.) The children were removed from adult wards and were segregated in a separate unit of the hospital. Constant supervision, as well as constant activity, was found to be necessary. While minor, though disturbing, behavior faults were overlooked, yet these children were not allowed to get the habit of explaining away their behavior on the grounds that they were "sick" or "nervous." No physical punishment was allowed; withdrawal of privileges was substituted. After ten years, 20 out of 76 discharged cases are said to have recovered sufficiently to take their place again in society (11). Some reports from other sources have shown somewhat less success. Certain it is that, where there has been actual damage to the central nervous system, there are limits to the improvement we can reasonably expect from habit training.

For many of the worst cases, institutionalization is undoubtedly the only sensible plan in our present state of knowledge. This, however, is easier said than done, since it is difficult to find suitable institutions or institutions that will admit postencephalitic children. Foster-home placement has not worked out well and is usually not to be tried, unless unavailability of an institution or reasons within the child's own home make it necessary.

While the child does remain in his own home, the parents must be helped to accept the fact that the child's behavior is due to an organic and not a moral defect. The child must be given good conditions of general hygiene. He must not be punished physically and should be given as much reassurance and emotional security as is possible under the circumstances. Some such children have sufficient insight into their condition and their behavior to develop feelings of inferiority and to become convinced that they are not wanted. This, coupled with a seeming inability to control behavior voluntarily, produces great emotional stress which should be relieved insofar as possible.

The Epilepsies

Nature of the disease. There is much that is confusing, debatable, and unknown about epilepsy. Even the name itself is not without question. Some authorities still speak of epilepsy. On the other hand, most authorities prefer the plural designation, because there are different forms of the disease with different etiological factors. Formerly a distinction was made between *symptomatic* or *organic* epilepsy, on the one hand, and *idiopathic* or *essential* epilepsy, on the other hand. In the former, the epileptic seizure was thought to be secondary to, and symptomatic of, a structural lesion, such as a brain tumor or the residual organic defect produced by such diseases as cerebral arteriosclerosis or neurosyphilis. Essential epilepsy, on the other hand, was not known to have any basis in structural defect. Studies of brain structure and function through the use of the encephalogram and the electroencephalogram, as well as advanced techniques used in brain surgery, have tended to break down this dichotomy, however. This distinction, therefore, is passing out of use in medical literature and is included here only in order that the terms may be meaningful when they are encountered in reading.

Many physicians versed in electroencephalography prefer to speak of *cerebral dysrhythmia,* because of the nature of the brain patterns in epilepsy. There is perhaps no medical research that is receiving more attention in the literature than the electroencephalograms of epileptics.

Etiological factors. Formerly heredity was assigned a conspicuous role in the production of epilepsy. This has already been discussed in Chapter II. It is true that family histories of epileptics show a disproportionately large incidence of alcoholism, feeble-mindedness, migraine, and nervousness in various forms. Interestingly enough, however, epilepsy is not found, as a rule, in more than one child in the same family. Rosanoff (78), after studying epilepsy in monozygotic and dizygotic twins, says: "The deduction seems justified that hereditary factors are not invariably present—therefore not essential—in the etiology of epilepsy." The production of epilepsy by organic defects has already been mentioned. Psychoanalytical theories have also been advanced to show that the epileptic seizures are a narcissistic flight into the unconscious in order to avoid intolerable situations. This explanation is more theoretical than demonstrable.

Epileptic manifestations. The epileptic "fit," which most readers have probably at some time or another witnessed, is the most conspicuous manifestation of epilepsy. It is known as *grand mal.* Such seizures, as a rule, begin with a cry or moan, which once heard can never be forgotten. The ensuing unconsciousness causes the body to fall wherever it may be. A period of *tonic spasm* ensues. The muscles become rigid. The tongue may drop back into the throat and cause suffocation, or it may be severely bitten between the clenched jaws. There may be frothing at the mouth. After a few seconds a *clonic convulsion* occurs, with violent jerking, kicking, and thrashing about. The duration of this phase varies considerably and may be accompanied by involuntary evacuation from the body. Sleep is likely to follow. When the child awakens, he has no recollection of what has happened. He may complain of a headache and of soreness in his muscles. Of course, he may also have bruises or even burns incurred in his fall. The fact that the epileptic falls wherever he may happen to be, whether against a hot stove or down a flight of stairs, is in contrast to hysterical "faints" in which the patient *chooses* his place to fall. The presence of many scars on the face is sometimes a diagnostic feature of epilepsy when a complete history is lacking. Another common but not essential feature of the grand mal attacks (not so common in other varieties) is the *aura* or premonitory symptom which may be obvious not only to the child but to members of the family as well. Sometimes the aura occurs only immediately before the seizure. It may be a sensation of flashing light or color; feelings of warmth, cold, numbness, or localized pain; sensation of odors; sounds or hallucinatory voices; disagreeable feelings in the stomach; or tactual sensations as though being touched or gripped at some part of the body. Sometimes the aura is motor in nature and may consist of localized jerking movements, or of some kind of activity such as taking off one's clothes automatically, or running. Psychic aurae occur in some patients and may last from a few minutes, in which the child has time to sit or lie down, to several hours or even days. In these more prolonged psychic aurae, the child may suffer from the knowledge that he is about to have another attack. His disposition may change, and he may be particularly irritable and hard to discipline. It is interesting to speculate on the origin of aurae. Are they but a natural sensory response of a nervous system going into cerebral dysrythmia, or may they occur perhaps by chance the first time but, because of the experience of the epileptic seizure which follows closely in time, become permanently connected with or "conditioned" to the seizure and thereafter play an etiological role in producing the seizure?

In some patients, grand mal attacks occur only during sleep. Cases of nocturnal epilepsy sometimes occur in which it is doubtful whether the patient ever really knows that he has attacks at all, since they come only during his sleep. For all epileptic children it is necessary, of course, that sleeping arrangements be made to prevent falls from high beds or the likelihood of becoming entangled in the bedclothes and suffocating without anyone's knowing it.

Serial attacks may occur, sometimes ten or fifteen within one day, but consciousness is regained between seizures. In *status epilepticus* the patient goes from one convulsion to another without regaining consciousness. In *epilepsia rotatoria* the patient turns round and round very rapidly; in other forms the child may run forward or backward.

Petit mal or minor attacks are often only a momentary loss of consciousness with no convulsive seizure. The child may be standing in class in school when suddenly his face takes on a vacant stare and he fails to hear what is being said to him. Suddenly he may "come to" and look about him with no consciousness whatever of what has been happening. Kanner (45) says that the difference between grand mal and petit mal is "quantitative rather than qualitative."

Epileptic psychic equivalents. Automatic acts and psychic abnormalities may follow or be a *substitute for* the convulsive seizure. The equivalents may be short or may last for several days. As in the other forms of the disease, the child has no memory of what he has done during the acute attack. The serious aspect of the equivalents is that they cause much abnormal and even delinquent behavior, more commonly perhaps in adults. Often these equivalents account for crimes of violence and brutality, wanderings, and theft. The so-called *fugues* or *twilight states* which may last for a considerable period of time may be either epileptic equivalents or something resembling them. The patient may, in an automatic fashion, perform routine duties of self-care, and at the same time do most unreasonable and illogical things, such as throwing money away or entering strange houses. A young girl so afflicted was brought to the attention of a social agency. It was fortunate that she was not turned over to the police. She had gotten into an automobile although she had never driven one before, had driven around, parked in front of a strange house, entered the house, gone to the bathroom, and washed her hair. Because convulsive seizures are either absent or so inconspicuous as to go undetected, such cases often escape diagnosis until some antisocial act has been performed which brings the patient to the attention of the police.

Jacksonian epilepsy. Jacksonian epilepsy is distinguished by the fact that the convulsion is confined to a limited group of muscles. Sometimes a hand, arm, foot, or leg is the only part involved and in this member there may be a localized twitching or jerking. In some instances the Jacksonian clonic spasm is the only evidence seen, but in other cases it may be followed by a grand mal attack. It has been thought that Jacksonian epilepsy is due to a specific cortical lesion and relief is sometimes brought about by improvement in the condition producing it. Kanner (45), however, calls attention to the fact that in some patients the Jacksonian convulsion may begin at one time on one side of the body and at other times on the other side.

So-called hysterical or *hystero-epilepsy* is usually not confused with genuine epilepsy. In the former there is always an audience; the reflexes are not involved; the tongue is not bitten; and place for the fall does not involve danger to the body.

Intelligence and epilepsy. Epilepsy may be found in individuals of high intellect—Caesar, Napoleon, Charles and Mary Lamb, Dostoyevsky, Flaubert, and St. Paul all suffered from epilepsy. The question of the intelligence of epileptic children is complicated by several factors (24, 45, 48, 49, 56, 88). Obviously, statistics gathered from institutions to which the worst cases are referred tend to give a darker picture than figures on the intelligence of epileptic children cared for in their own homes. Furthermore, it is very difficult for a clinical psychologist to assure himself that he is examining an epileptic child at a time when the child is not suffering from the effects of a recent or impending attack or from medicine given to quiet him.

Peculiarities of intelligence-test performance by epileptics has long been noted. Lengthened reaction time no doubt penalizes epileptic children if time restrictions are rigidly adhered to during testing. Epileptic children seem to have particular difficulty with such test items as the weights test, visual designs reproduced from memory, reading and reporting, digit and other tests depending upon attention and immediate memory (24, 55, 88). Wide scatter, from a basal year where all test items are passed through a top year where no test items are passed, is so frequent as to be quite characteristic. It should be noted that most of the reports on epileptic test responses and scatter have not been on the *new* Revised Stanford-Binet Test, on which scatter is admittedly wider even on normal subjects than was true on previous tests.

The question of the intelligence of epileptic children is further complicated by the possibility of deterioration brought about by the disease itself (24, 55). Exclusion from school may bring about a condition resembling deterioration, which is more apparent than real. Intellectual deterioration is perfectly obvious in some cases, and yet other cases apparently show none. What improved treatment, with its attendant reduction of seizures, may do in preventing deterioration awaits future research. Kanner (45) says,

> The knowledge that therapeutic and even spontaneous recoveries do occur and that, on the other hand, in spite of all effort progressive deterioration often cannot be checked should cause one to abstain equally from absolute pessimism and unlimited optimism.

There is every reason for believing that deterioration is related to seversity and frequency of seizures. This makes medication which reduces seizure of the greatest importance. Arieff (4), Collins (24), and Yacorzynski (98) may be consulted for studies on deterioration.

Personality and epilepsy. It has been generally assumed (35, 79, 88) that a fairly characteristic personality picture distinguishes epileptics. Certain it is that one finds many of them displaying much the same type of disposition and behavior. Epileptics are said to be egocentric and selfish in the extreme, displaying a lack of sensitivity for the feelings of other people. An unusual interest in religion and the Bible and a meticulous attention to detail are often noted. Set phrases and moralizing platitudes are frequently used. Quick change of mood, sudden outbursts of temper, voracious appetite, enuresis have been frequently noted in epileptic children. To date it is impossible to say how much of the personality of epileptics is due to the disease itself and how much is due to environmental deprivation and to the emotional reactions of other persons to epileptics. Current investigations, however, seem to show that generalizations about the personality of epileptics are hazardous (5, 6, 47).

Treatment of epilepsy. While both diagnosis and treatment belong in the realm of medicine, yet it is essential for professional workers to know something of what is being done (38, 45, 53, 78, 89). In this way they may be in a position to bring about coöperation between the family and the physician.

Recent advances in medical care have controlled the frequency of epileptic seizures, and in some cases have reduced them to a minimum.

Bromides were formerly used almost exclusively. Skin rashes and stomach disorders caused by bromides make this treatment inadvisable for many patients. Phenobarbital, although it tends to make patients sleepy, is often administered. The most commonly used drug at the present is sodium dilantin. Its use brings about improvement in the great majority of cases. Under proper and continuous medication many patients can be kept seizure-free. Restriction of chloride intake and of water intake (dehydration) is recommended in many cases. Fasting, either as a method of treatment or as a preparatory step for certain medication, is frequently prescribed. A *ketogenic diet,* or one in which there is a large amount of fat and small amount of protein and carbohydrate, brings about ketosis, or acidosis. This has been found helpful in reducing seizures. Surgery is sometimes resorted to when there is a definitely established cortical involvement, and currently the insufflation of air by spinal puncture is being used by some physicians (88).

What is perhaps of more importance, from the standpoint of the non-medical professional worker, is some knowledge as to the immediate care of the epileptic child during a seizure. It should be borne in mind that epileptics rarely die during an attack. Therefore, distressing as seizures are, they should not cause too much excitement. It is very important to make sure that the child does not hurt himself during an attack. He must be prevented from hitting sharp objects or hot stoves and the like. The insertion of a folded handkerchief, or any hard object which cannot be bitten, between the teeth will prevent the child's biting his tongue. Sometimes it is necessary also to guard against choking, which may be caused by the tongue's dropping back into the throat or by an accumulation of vomitus in the throat. Care of excreta and prevention of any embarrassment caused by involuntary evacuation are important.

Social planning for the epileptic child. While there are, no doubt, great differences in the sensitivity of epileptic children, there are some who have sufficient insight into their condition so that their mental anguish must be extreme. Often they refuse invitations which they would very much like to accept for fear they will have a "spell." When they do go out socially, they may be afraid to move from one chair to another for fear they will be overcome by a seizure while so doing. Some of the more intelligent children, particularly those who, by reason of the severity of their disease and the inability of the home to cope with it, have to be institutionalized, witness the deterioration of others about them, and live in dread lest the same fate befall them.

Space is being given here to an account of an epileptic girl whose history illustrates many of the points which have been discussed above. Jane is of normal intelligence and, since treatment seems to be reducing the frequency of her seizures, she may remain so. She was in high school when her condition became so bad that her highly disorganized family could not cope with it, and she had to be placed in an institution where proper care and medication could be assured. The father "is thought to have a slight mental condition and is said to be lacking in reasoning ability." His brother died at the city poor farm. Jane's mother at one time had a "nervous breakdown" and attempted suicide by taking poison. The oldest child in the family is happily married and is the only member of the group who has made anything like a normal adjustment. The next child had a runaway marriage which resulted in her having two children for whose support she has been entirely responsible. The next child is a boy who started to college, but had a mental collapse which required his being institutionalized for a time. The next child is a boy, who at the age of 22 had to be institutionalized because of a mental condition. The next girl has had to have psychiatric care, and a "relapse" is predicted for her unless she gives up some of her ardent communistic activities to which she devotes five nights a week, attending classes and "lecturing to listening groups." The next boy is "dull" and had to be assigned to a trade school. The next sister committed suicide by taking rat poison.

Jane, because she had already had more education than the institution was prepared to continue for her, and because she was interested in writing, was helped by an English teacher from a nearby college. As a sample of her "writing," which she asked to have judged and corrected, she wrote *The Downfall of an Epileptic.* Because of the psychological insight which it provides, rather than because of its literary merit, it is being reproduced here with Jane's permission. (Of course, all names have been changed.)

THE DOWNFALL OF AN EPILEPTIC

(BEING AN ACCOUNT OF LUCY BROWN WRITTEN BY JANE REYNOLDS—BOTH PATIENTS AT THE HOME FOR EPILEPTICS.)

The first time I saw Lucy I felt a great surge of relief, a little surprise and shock. She was so tiny compared to the rest; I couldn't believe she took spells, yet I had been told everyone here were Epileptics. I was relieved because everyone else were so terribly old! At least to my notion they were. And more relieved when two other girls, a little shorter than me, walked in the dining room.

It was my first meal at the Home, I hadn't been there two hours, but I hated the place and all the people in it. I couldn't see how that stubby little girl could have such a bright smile—even if it was sort of shy—and look so happy. I forgot to cry just looking at her. Her feet dangled inches from the floor when she sat down. When the meal was over—the longest one *I* ever had—I got ready to run upstairs, after all, I knew my nose was terribly red and swelled from crying. I had bawled at the table, right in front of everyone. But my way was stopped by the little girl who put her arms tightly around me, and asked me what my name was, and a few other questions, gave me a last hug, or rather squeeze, and put on her sweater and tam quickly and went out.

After the girls were done with the dishes and came upstairs I asked them about the little girl. I found out her name was Lucy, and that was about all they knew about her. She was just one of the "kids" to them. I found out that she was almost twelve! Her mother and father were dead but she had a brother and an aunt. She doesn't remember either of them very well. Her brother never came to see her and the aunt very, very seldom. I wondered that if I were to stay here any longer if my mom and pop would forget about me. I felt so very sorry for Lucy. Yet she didn't seem to mind it a bit. She was such a small, but solid thing with her straight blond hair. And so "smiley" too.

I didn't get to know Lucy very well until spring came, because we lived in different buildings. But in spring both of us came outside, and we walked around the buildings sometimes. For all my being older than her, and out in the world more, she knew what peonies were, and could tell a pear tree from an apple tree, and a few other hundred things. I didn't like to show my ignorance, so foolishly I just kept quiet. But every now and then I'd ask her, "What's that?" and sometimes she'd tell me, or shrug her shoulders, or say, "I don't know." But I learned almost everything, because I stayed on —and liked it!

Lucy had never gone to school, but she knew the alphabet and the Our Father. It must have been pretty tedious for her to sit in church because she couldn't read and she didn't listen to the sermons—neither did I, that is in the beginning. After I got older I listened and liked his sermons.

I wonder if Lucy will ever listen to Mr. Kirby's sermons and understand them. No matter how old she gets, will she ever listen and understand? It doesn't seem, now, as if she ever will, but maybe—

In Sunday School I guess she had a better time than we did. At least me. I was always scared that Reverend Kirby would ask me a question I didn't know since I knew very little of the Bible. Because after the opening hymns were sung Miss Carter, she was the matron in charge of the building Lucy was in, would take Lucy in the vestry and teach her something. One Sunday I asked Lucy what Miss Carter told her, but she was very vague about it. She didn't even seem interested. But she did say that Miss Carter told her about God and Jesus. Then I said, "But I heard you sing, do you read it out of a book or did Miss Carter teach it to you?" She said she sang it out of a book, but since she can't read, I don't know how she does it. I think she just remembers what we sing in the dining room in the morning and evening. I don't know.

One morning this summer in '35, Lucy didn't come to the table, and I asked Helen who sits next to her at the table, and is also her roommate, if she had a spell or was put in the cooler because she was naughty. Lucy is very mischevious sometimes and Miss Carter puts her in the cooler for punishment. (A cooler is a small room with a chair, a high barred window and a low cot. The cot is very low so that if you happen to have a spell while you are sleeping or just lying down to rest and roll off the bed you won't get hurt—at least not much.) Helen said that Lucy was sick, that she had had three spells during the night and one this morning. Since Miss Carter was on her vacation at this time the girls had put her in the cooler so she wouldn't get hurt if she had any spells while we were eating breakfast. I was a little surprised because Lucy usually had just one every month or so. I didn't think very much of it though. But she didn't come to the table at dinner and Helen didn't know anything except that she was still in the cooler. Lucy came over in the evening but didn't eat much. I told her she walked like a drunkard, and she laughed and said she was dizzy. She came over for breakfast, but Helen said she had about four spells in the night. You could tell she was sick, too. She could hardly lift her cup to her lips. Her hand jerked and spilled its contents. She told me her hand was dizzy and she couldn't help it when her hand jerked. She slobbered while she was speaking and I asked her what was wrong, couldn't she even talk anymore? She just laughed, but the spit kept running from the sides of her mouth as if she had no control over it.

I don't remember if she came to anymore meals after that, but soon they took her place away from the table. That is, taking away her napkin ring from the table and the girls were told not to set her place anymore. Her meals were taken straight from the kitchen on a tray. Off and on they took her out of the cooler for a few meals, but always she had to be put back. It was about a week since she had gotten ill.

Miss Carter had been on her vacation at this time and when she came back she took Lucy out of the cooler and arranged to have her back at the table. Lucy hadn't been back at the table for three days before they decided she better have a bib. She kept on feeding her face and dress, (Lucy was always generous, whether intentionally or unintentionally), and if she wasn't doing that she slobbered on her dress. Though she didn't slobber as much as she did the first time I saw her, after her "spelling," as we call it. She seemed a little tired, and still "drunk" as I termed it. They had to put a small dish towel at her place because she soiled the table cloth. It wasn't her fault, her hand just seemed to jerk, and she couldn't control it for some reason or other.

Lucy is as normal as she'll ever be, now, I think. Unless by God's will something happens.

She hardly slobbers at all now, but laughs and giggles incessantly, for no reason at all. It's hard for her to make her bed now. It's all lopsidy and crooked now, whereas it used to be the neatest in her room. Her dressing is kind of crooked too, until someone lends her a helping hand. Miss Carter doesn't take her to the vestry anymore. But she still can say the Our Father and the alphabet.

She doesn't seem to mind taking a lot of spells. Just sometimes she is impatient with herself if she can't remember something.

Yet she doesn't seem to care about taking so many spells. The rest of the people take spells—and so does she!

O my God, will I ever be like that?
Please take me before I become another
"Downfall of an Epileptic"—in senses and mind,
But not my will, oh Lord, but Thine.

Jane Reynolds

Education and vocational guidance. These matters present difficulties if one wishes to plan wisely for all concerned. Some public schools report that epileptic children who have only occasional seizures can be taken care of in school if the other children in the school are taught to take an unemotional and "medical" view of the seizures when they do occur. Certainly when attacks are frequent enough and serious enough to be disturbing to other children and embarrassing to the child himself, he should be removed from school. Whether or not he should be removed from his home and placed in an institution depends upon circumstances. Where the condition is very grave, involving frequent attacks and deterioration, or where the home does not provide adequate care, institutions are to be preferred. In less serious cases, fairly normal education may be provided in school, in special classes for epileptics, or through instruction by teachers for home-bound children.

Psychic equivalents offer a serious problem. If a child so afflicted is delinquent, he does not properly belong in an institution for delinquents, but rather in a hospital for epileptics. Until we have more schools, hospitals, and other institutions suitable for children with extreme behavior disorders and emotional disturbances, provisions for the child with epileptic equivalents will remain inadequate.

Vocational guidance must point up to trades not involving hazards of height, machinery, sharp instruments, or dangers to other people. (A city department store once discovered that an epileptic had been employed to operate one of its elevators.) Some epileptics have lived comfortably on farms where they did garden work but were not required to work around animals. Work of various kinds which does not require going away from home is often indicated.

Training both at home and at school must be freed so far as possible from superstition; from hectic experimentation with one medicine and doctor after another; from emotional trauma caused by the reaction of other people to epilepsy (hence sometimes institutionalization is to be preferred); from the formation of a bad mental hygiene that allows the child to use his illness as an excuse for undesirable conduct.

Perhaps it is not amiss to reiterate that often our duty to the epileptic consists mostly in arranging matters so that he is under medication as prescribed by his physician. Recently a social worker called on the writer for suggestions as to how a young girl could best "express herself." The social worker went on to say that this girl had had to live in institutions all her life and that now she wanted to get out on her own and "express herself." When asked in what kind of institution the girl had lived, the social worker was a little vague but she did mention one institution where the girl had lived for a number of years which is a hospital for epileptics. The psychologist suggested that before any aptitude or vocational tests were administered it would be well to get a complete medical history of the client. A further telephone call a few days later indicated that one of the last church institutions where the girl had stayed had reported that her bed was often wet in the morning, that sometimes in the morning she seemed almost unable to get out of bed and was listless, and that often she seemed to have sore lips and mouth. In the meantime, the young girl had gone out and secured a room for herself in a private home where complaints about wet beds were beginning to come in. Again the social worker called, asking for tests for this "poor girl who has had to live in institutions all her life." By that time a diagnosis of epilepsy had been established. When asked whether the girl was under medication, the worker, after asking the client, replied that she was not. When all the circumstances became known, it appeared fortunate that this orphan epileptic girl had been *able* to live in institutions instead of being out on her own—and without medication. Medication should come first, and then perhaps aptitude and achievement tests.

Syphilis

Nature of the disease. The infection caused by the organism *treponema pallidum* or *spirochaeta pallida* has already been mentioned in Chapter II in connection with our discussion of heredity. Of course, children may acquire syphilis just as adults do, through sexual contact, breast nursing, kissing, or even blood transfusion. Acquired syphilis in children, however, is relatively rare and its course, once established, is like that of adult syphilis. Congenital syphilis is rather more common among children and runs a somewhat different course. Congenital syphilis is most often passed on to the child by direct infection from the mother before or during birth. Whether the father can transmit the disease except by infecting the mother is not definitely known. In Chapter II we quoted Sherbon to the effect that it probably can be so transmitted. Dorland's 1938 *Medical Dictionary* defines congenital syphilis *and* hereditary syphilis as "syphilis existing at birth, whether derived from the male reproductive element or due to infection from the mother." This point need not further concern us here. Laboratory studies will someday, no doubt, give us a definitive answer.

An infant at birth may show unmistakable signs of syphilis, or lues. One of the commonest characteristics is *snuffles,* with extensive involvement of the mucous surfaces of the nose. The voice is often hoarse. There are skin eruptions and mucous patches. Clefts and excoriations in the skin, called *rhagades,* are common, especially around the mouth and anus. Fissures about the mouth, after healing, produce the so-called "purse string" deformity. Nutrition is almost always impaired and development is slow. The liver is usually involved and enlarged. The child with congenital syphilis often appears wizened and is likely to be smaller than children his own age. The bones are frequently involved in the infection, and teeth, eyes, and ears suffer likewise. Saddle-nose and conspicuous veins are common.

A diagnostic formula to which frequent reference is made is *Hutchinson's triad*—namely, interstitial keratitis (deep deposits in the cornea of the eye giving a ground-glass appearance), labyrinthine disease (disease of the internal ear), and Hutchinson teeth. Hutchinson teeth are second teeth that are notched in the form of a crescent. The "test teeth" are the upper central incisors. Other teeth, however, may be variously misshapen—rounded like a screw-driver or peg-shaped. Obviously some of these signs of congenital syphilis are not apparent at birth, but may appear as the child grows older.

The course that the disease takes differs from one child to another. Statistics from institutions for the feeble-minded show that from three to ten per cent of the inmates are syphilitic. Involvement of the nervous system is very grave. The attack may be upon the meninges covering the brain, the blood vessels of the brain, or the brain itself. Cerebral syphilis, tabes, and paresis are some of the forms in which neurosyphilis manifests itself. Tabes in children is rare. Some congenitally syphilitic children develop juvenile paresis and some do not. Why this is true has been a matter of much speculation. Juvenile paresis, when it does develop, usually begins to manifest itself between eight and ten years of age. Marked deterioration soon appears (55). Memory becomes faulty; speech becomes infantile; and judgment is impaired to the point that the child may commit serious misdemeanors in consequence. Handwriting and gait become uncoördinated. Some children in paretic condition become quite euphoric and expansive. Tendon reflexes are hyperactive, and the Babinski reflex, which normally does not appear in children of this age, may be evident. Occasionally a paretic child has seizures much resembling those of epilepsy.

Tests and treatment. The professional worker who has occasion to read hospital reports needs some familiarity with the terminology used in these reports. Most tests for syphilitic infection may be made on either the blood or the spinal fluid of the patient, or both. The commonest tests are probably the Kahn, Kolmer, Kline, Eagle, Hinton, colloidal gold (spinal fluid), Wassermann, and Noguchi. The relative efficacy of these tests; the meaning of the reactions (positive or negative); the necessity for repetition; and the danger of suspending treatment after one or two negative reactions belong in our field only to the extent that, as professional workers, we may be able to bring about family coöperation with the medical program. Whether and when the disease is infectious and communicable likewise belongs to experts in this field. It may be wise, however, to quote Rosanoff (78) on this point:

> Syphilis, treated or untreated, is most infectious early, grows less so with lapse of time, is rarely infectious (but may be so) after 5 years. Late syphilids and late prenatal ("congenital") cases are not infectious.

This agrees with a statement of Dr. Morris Fishbein, quoted by Scheidemann (79), that congenitally syphilitic children, even though they have received no treatment, are not likely to pass on the infection by the time they have reached school age.

Prevention and treatment of syphilis are two of the largest public health problems of our country. The discovery of infection in pregnant women is being facilitated by routine prenatal care. Professional workers often play a very important role in this matter by arranging and following through on prenatal examination. Treatment of infected women is of greatest importance in the prevention of congenital syphilis. Treatment, however, for either child or adult has its mental-hygiene hazards. Treatment entails a certain amount of discomfort. If there are no obvious open sores, it is difficult to build up in ignorant families an appreciation of the necessity for prolonged treatment. Families who know some of the terminology may refuse to follow through on treatment after a "negative" test has been reported. The length of treatment and the number of negative tests required to insure permanence of cure are fairly easy for the medical profession to determine, but the matter of securing coöperation of the patient and the patient's family is quite another problem. Early stages of syphilis, before it has attacked the central nervous system, respond to treatment (38). One of the commonest treatments is salvarsan or 606, so-called because its efficacy was determined on the six hundred and sixth experiment of Ehrlich, the German scientist. Various other drug treatments, as well as malarial inoculation, are also used (9).

During World War II some short-term treatment techniques were developed that give promise of making cure easier both physically and psychologically. It is too soon yet to have a definite pronouncement as to their permanent efficacy.

Chorea

Nature of the disease. The word *chorea* comes from a root which means *dance.* It is applied to an affliction in which the child makes jerking movements. It is sometimes called St. Vitus' dance. The connection seems to be that St. Vitus was much disturbed over the hysterical dancing manias which at one time or another swept over great groups of people. Before his martyrdom, St. Vitus prayed that all who commemorated him should be spared from the dancing mania. A voice answered, "St. Vitus, thy prayer is answered."

Dancing mania, as such, has nothing to do with *Sydenham's chorea,* which is the form seen in children. Sydenham's chorea is most common in children from about 5, 6, or 7 years of age to 13, 14, or 15 years. It is two or three times as common among girls as among boys and is said to be frequent among Jewish children and rare among Negroes and Indians. It is much more frequent in the spring or summer months than at other times. It is quite different from tics, which are usually confined to a relatively small number of muscle groups and do not vary in pattern from one time to another. Sydenham's chorea is quite different from *Huntington's chorea,* which will not be discussed here except to say that it is a definitely inherited type of chorea, chronic and progressive, and much more common in adults.

Etiology. The etiology of chorea is now thought to be rheumatic infections which are often associated with diseased tonsils. The same rheumatic condition often spreads to heart muscles, so that we find a common sequence to be: tonsilitis, rheumatism, chorea, heart trouble. The professional worker who may be visiting a home often hears mothers and children complaining about the child's "growing pains." The notion seems to be that unequal growth and stretching at one time of bones and at another time of muscles and tendons causes pain in the growth process. It needs to be remembered that growth is a perfectly natural process and that when it *is* accompanied by pain there is something wrong. No one doubts that children often do suffer from aching legs and must have them rubbed before they can go to sleep. The difficulty lies in thinking that rubbing will *cure* the *cause* of the pain. So-called growing pains are likely to be a type of juvenile rheumatism which needs medical attention if worse disasters are to be prevented.

It is sometimes said that severe fright is often followed by chorea, and excessive pressure in school is sometimes blamed. In the minds of some authorities, there is doubt as to whether these emotional episodes are anything more than the last straw—the precipitating factor which finally brings the developing chorea to light.

There seems to be a predisposition to chorea in certain families; one sometimes sees two or three children afflicted in the same family at one time. If it were not for the fact that we also see siblings afflicted with chorea at different times, we might be disposed to think that instead of a familial predisposition there was only family imitation. One does sometimes see such imitation in institutions where one child may cause, through imitation on the part of others, what amounts almost to an epidemic of choreic movements.

A child may have recurrent attacks of chorea. Another caution is in order at this point—namely, that a child be not allowed to simulate chorea in order to obtain immunity from discipline or punishment.

Other aspects of the disease. The onset of chorea is usually gradual. It is of great psychological interest that often the first symptoms are emotional and social rather than physical. The child may display unusual behavior. He may be irritable, "nervous," restless, and fidgety. He may drop things, stumble continually, fall often, and may even have difficuty in getting his food into his mouth. Grimaces, jerking, twitching, stumbling, and dropping things are characteristic.

The writer recalls a case she saw a few years ago. The girl's mother referred the child because of complaints about her behavior in the private school she was attending. One of the latest episodes had to do with an arabesque design which the child had drawn and was painstakingly coloring in school one day. Previously she had destroyed maps which other children had made, but this, the teacher thought, was because the child's own maps were so poor. On the day in question, the teacher thought that the coloring of the design was the best art work the child had done in months. Suddenly the child seized a red crayon and almost in a manic fashion scribbled over everything she had done. This and some other peculiarities of behavior led the mother to decide that she should consult a psychologist. After a preliminary interview with the child and her mother, the matter was referred to the family physician because chorea was suspected. Shortly after, the physician called on the telephone to say: "The problem is yours, not mine. She does not have chorea." On the basis of this diagnosis, another appointment was made with the child for the following week. On the day on which she was to come to the office, the mother called to say the child had become much worse, the doctor had been sent for, had definitely diagnosed the case as chorea, and had put the child to bed for perhaps six weeks. Another case comes to mind of a ten-year-old boy who had been whipped in school repeatedly because he made so much noise and dropped so many things on the floor. Recently he had opened pillows at home and had let out all the feathers. His behavior improved as his chorea improved. It seems almost incredible that in this twentieth century any teacher could so far fail in her professional skill as to whip a *sick* child because he drops things.

Treatment. The condition may last from a few weeks to several months or a year. The prognosis is good, however. Rest, sedatives, hydrotherapy, and occasionally fever treatment are recommended by physicians. The point of immediate interest, however, is that *absolute rest* is therapeutically necessary but difficult to achieve. Brilliant children sometimes have chorea, and for them it is next to impossible to enforce absolute rest, with no stimulation from books, stories, or games. After a time a point is reached where a rigid medical program becomes self-thwarting because there can *be* no rest without *some* reading or *some* stories. Most physicians recognize the difficulty of keeping a child absolutely quiet twenty-four hours a day when the child is not suffering. In the case of less brilliant children also, a rest program is often difficult of attainment. We have mentioned above a boy who was punished for behavior disorders due to chorea. That child belonged to a family where both the father and mother were chronically ill, where one sibling was suffering from malnutrition, another from chorea also, and the three-month-old baby had a hernia. The house was a three-story affair with the kitchen and the only water supply for the house in the basement; the sitting room was on the next floor; and two bedrooms on still another floor. The prescription had been: "A hot bath every night before retiring and a bed alone." The mother had tried faithfully, in the face of all her other duties and her own health handicap, to comply with orders. She would heat water each night and carry it up unending steps to bathe the child, since he was no longer able to do it himself. This she would try to do early in the evening so that she could put him into a bed by himself before the other children had to go to bed. When he was asleep, he would be moved over and two or three others would be put in with him. While several members of the family were receiving clinical examinations and treatment, it rested upon the *social worker,* who was called in, to make provisions by which medical orders could be made effective. Social workers and public health nurses are often the *sine qua non* of medical therapy.

Diabetes

Nature of the disease. Because the consequences of diabetes are so drastic, on the one hand, and because there is so much that can be done for the diabetic child, on the other hand, professional workers should know something of the nature of the disease and should know at just what points they can be of help. *Diabetes insipidus* is not common among children. *Diabetes mellitus,* sometimes called sugar diabetes, is our immediate concern. Diabetes mellitus is not among the common childhood diseases; only about one out of 8,000 has it. It is more easily recognized than formerly, and therefore treatment can be instituted earlier.

Etiology. In the human pancreas there is a group of cells known as the Islands of Langerhans, the function of which is to secrete insulin. Insulin helps the body to store and use up sugar. When there is an absence of insulin, sugar is not consumed; the body does not get the energy from the sugar; and the sugar is excreted from the body through the urine. It is also found in large amounts in the blood. The cause of this dysfunction of the pancreas is not entirely known. Heredity plays a role. It is said by some geneticists that the disease is a Mendelian recessive and that two diabetics, therefore, should not marry. Diabetes is said to be 75 per cent more common among Jewish than among non-Jewish people. Infection is related to diabetes not only as an etiological factor but also as a serious complication, since all infections seem to disturb the sugar balance. Obesity and pregnancies, the other common causes, do not pertain materially to diabetes in children. The first indications of diabetes are thirst, hunger, and urination—all in excessive degree.

The problem of the professional worker. The point of greatest interest to the professional worker in regard to diabetes in children is the education that such children must receive. This is necessary in order not only to prolong their lives but also in order to have them live as nearly normal lives as possible. There seems to be a widespread idea that diabetic children as a class are of superior intelligence. It is doubtful whether such a generalization can be made, as has been shown by Teagarden (90). However that may be, there is a very definite program of training that must be given to diabetic children, and medical science is making great progress in the psychology of treatment.

Diet, insulin, and exercise are sometimes called the "three R's" of diabetic education. It is interesting to note that the discovery of the value of insulin to diabetics was made and proved when the first dose of insulin ever administered to a human being was given to a diabetic boy of 14 at the Toronto General Hospital. Currently, protamine zinc insulin is also being used. Improved needles by which insulin is injected have been devised, and children are taught to inject their own insulin.

The child is taught what foods are carbohydrates that easily change into sugar in the body and of which, therefore, he must eat less. He must learn the fats and proteins. He must also learn to weigh or measure the articles of his diet according to the doctor's orders. Diabetic children show a surprising willingness to coöperate on a dietary regimen under the present system of teaching and coöperation between the child and the doctor. The child also needs to know that, by breaking diet or failing on his insulin treatment, he may have diabetic coma or diabetic ketosis. Usually this condition does not come on suddenly, and the child may learn the symptoms and learn to go to bed and to send for the doctor.

The child is also taught to recognize the symptoms of insulin reaction or insulin shock, which comes about when there is such a drop in the blood sugar that there is insufficient sugar upon which the insulin can act. The symptoms are hunger, weakness, anxiety, nervousness, and trembling. The end result is unconsciousness. Diabetic patients are sometimes given cards to carry on their persons, announcing the fact that the bearer is diabetic and if found unconscious should be given two tablespoons of sugar dissolved in water until his doctor, named on the card, arrives.

Camps for diabetic children are available now. By such means the child is provided with all the benefits of camp life, but is spared the embarrassment of being "different." It is said that, after an experience at such a camp with others who have to live under the same regimen as himself, a diabetic child is likely to go back home with his morale increased and better able than before to adjust to his restrictions.

The professional worker who is working with a clinic or a physician in helping to build up proper attitudes and habits on the part of a diabetic child will be interested in the releases of the New York Diabetic Association, and in several of the books and articles listed at the end of this chapter (17, 18, 36, 42, 43, 44, 62, 63, 75, 80, 81, 82, 95).

Other Disease Conditions

Any physical condition or disease entity that has concomitant psychological or social problems may at any time become of interest to a social worker, school social worker, nurse, or probation officer (8, 13, 46). Heart diseases often entail such restriction of activity that school attendance and recreation require ingenuity and imagination on the part of all concerned. Some communities are fortunate in having hospitals for cardiac children. Here the child may have companionship with other children who must live, temporarily at least, under the same restrictions; where he may have school facilities; and where he may be taught to "count on each step" as he mounts or descends stairs; and other habits which, if faithfully carried out permanently, may prolong his life indefinitely. Some institutions of this kind think it is easier to teach the child to count on every step whether mounting or descending rather than to cause confusion by having the child count only when he goes upstairs. While the child is living in his own home and is playing with children who do not have health restrictions, it is very difficult indeed to institute a safe physical program or to secure coöperation from the child.

The obese child has already been discussed in Chapter VI. The mental hygiene aspects of obesity may constitute quite a hazard, particularly to adolescents. One such, a friend of the writer, had been more or less unsuccessfully trying to diet to reduce her weight. One day in utter discouragement she threw herself on the bed and was heard by her mother to be saying, as though trying to bolster up her own will power, "If Ghandi can do it, I can do it."

The restrictions of diet imposed upon the allergic child require skillful handling if we wish to build up coöperation and an acceptance of limitations by the child. Tuberculosis, with its prolonged treatment, also taxes the coöperation of the family and the child, particularly when, because of ignorance, they cannot comprehend all that is involved. Treatment for endocrine disturbances sometimes offers a psychological hazard unless skill and subtlety are used in educating the family to acceptance and coöperation. In some sections of the country, hookworm involves psychological problems of nutrition and of both physical and mental development. Chronic skin irritations present their own particular difficulties to those responsible for the care of the child. Acne is the bane of existence for many adolescents and often interferes seriously with their willingness to participate in athletics and social affairs. Fortunately medical treatment is now much more effective than formerly for the relief of this condition.

Long illness of any kind and long convalescence invariably require serious consideration if the morale and coöperation of the child are to be maintained, and if undesirable defense and excuse mechanisms are to be prevented. Professional workers who have children with any of these conditions should try, if possible, to make the acquaintance of the attending physician or the staff of the clinic where the child may be receiving treatment. Such acquaintance will go far toward resolving medical, domestic, and mental-hygiene problems. Every worker likewise should have access to books on children's diseases (19, 29, 38, 45, 58, 79) through which she can build up an understanding that will be of service to her, the child, and the physician. Acquaintance with local or national agencies will offer possibilities that the professional worker may otherwise overlook, and it should be borne in mind that such a source as the Federal Children's Bureau will always refer to the proper places questions on which it cannot itself give help.

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Chapter XVI

CHILDREN WITH VISUAL AND AUDITORY HANDICAPS

Eye Defects

Categories. Some take the position that it is a mistake to categorize individuals who have such defects as blindness. The argument is that in most particulars the blind, or the deaf, or persons of any other category are like persons without the defects and that by segregating them in our thinking we are likely to lose sight of this fact. There is much to be said for this position, and it is certainly true that there is a wide variation among the blind in regard to any one trait. However, it is just as true that, if we never consider these *groups* as such, we shall never learn some things that will be valuable to us in working with *individuals* within these groups. For example, the administrator of an office dispensing state funds to the blind remarks that her staff had worked with these clients only a short time when they learned that the clients preferred to take the worker's arm rather than to have the worker take the client's arm. Thus, by observing blind persons in the aggregate, much of the present-day educational program has evolved to its present state of improvement over older methods with the blind. Unwillingness to categorize any *defect* group under any circumstances is an ostrich-like procedure; at times, it has led to some inappropriate procedures that have had disastrous consequences. This is true of individuals within the group as well as of those who try to help them. Social, medical, recreational, educational, and vocational planning and care would seem, therefore, to justify a consideration of the blind child *as a blind child,* as well as to consider him *as a child.*

The deprivations of the blind. Just as it is impossible for a person who has always been totally blind to imagine the nature of a great deal of the experiences and life of the sighted, so it is hard for sighted persons to imagine the world of the blind. The writer recalls vividly an experience she had while reading to a blind student from a psychology textbook. The text mentioned "perspective" and the blind student asked for an explanation of the word. Visual perspective is not part of the life of the blind and therefore presents rather grave difficulties as to explanation. The failure of persons with normal sensory equipment and persons with sensory defects to understand one another often leads to unfortunate results. Children in school are often criticized for obstinacy, when as a matter of fact they are responding only in terms of their deprivations, beyond which they cannot go. Children with double vision, or half vision, must feel that adults are most unreasonable when they call "wrong" the thing the child *knows* he sees. Similarly, this failure to understand leads the blind sometimes to misunderstand their own limitations. This is particularly important in vocational selection, as well as in getting about alone. On the other hand, normal individuals fail to realize that the deprived individual does not know what he lacks or that he lacks. The story is told of a little child who was fitted with glasses. Then for the first time in her life she saw the cracks in the floor. "What are those?" she asked. "I never saw them before." In surprise her mother said, "Why, dear, why didn't you tell us you could not see them?"

It might be well to remind ourselves of the part played by the sense organs in our mental life. Psychologists and philosophers in olden times spoke of the "five gateways of the soul." These five gateways were the senses of sight, hearing, taste, touch, and smell. It is through these senses that impressions reach our consciousness. The saying was modified in more recent days to: "Nothing ever gets into the mind that was not first in the sense organs." Essentially the concept is still held to be true, except that the number of sense organs is now known to be considerably greater than five. Each of these five sense fields, furthermore, can be broken down into more specialized sensations within each sensory modality. In addition, there are innumerable sense organs in the muscles, tendons, joints, and internal organs. With this modification in meaning of the term *sense organ,* it is still true that "nothing gets into consciousness or the mind except through the sense organs." How could it? For this reason, the mental life of a child born blind to light and dark as well as to color will have many gaps that no amount of training will ever be able to overcome. He may talk about colors—in fact, he has to—but his notion of color is somehow or other a translation via some of the sense fields which he actually has and is *not* color. The dreams of such a child contain no color, of course. Similarly, a person born totally deaf never hears music. He may learn to feel vibrations of sounding strings, may enjoy them, and may be able to identify tunes thus, but he is *not hearing.* In this connection it is important to remember that the mental content of a person who was born with normal sensory equipment and who suffered deprivation in any sense field after, let us say, six years of age or thereabouts is *vastly* different from that of a person *born blind* or *born deaf*.

Only those greatly experienced in working with blind children can be sufficiently familiar with their lack of mental contacts in certain fields to be able to instruct them adequately. For example, consider the question of direction and distance. Their teachers sometimes speak of the dangers blind children impose upon themselves when, for example, they sit in third-story windows because they have not learned the distance from the window to the ground. It is very difficult not to take for granted that they perceive weather signs, evidences of filth and clutter, character of flowers and plants, or approaching objects just as sighted children do.

Sensory perception. The man on the street still clings to the old idea that the blind person, or the one with any sensory deprivation, *therefore* has keener sensitivity in some other sense modality. The notion prevails that nervous energy not used in vision is present, nevertheless, and must be distributed among the remaining fields of sense perception. Although experiments to prove amount of sensory acuity (other than sight) in the blind lack scientific validation, yet the evidence so far accumulated gives no evidence of their sensory superiority in other fields. There seems to be no foundation in fact for such a belief. Certainly, known facts in other phases of neurology give no support to these claims. As a matter of fact, if we include among the blind those blinded by disease, there is even reason to believe that other sense fields, as well as vision, may be impaired rather than improved. In an article published by the Perkins Institution, Gabriel Farrell cites the case of a little blind girl who seemed to lack acuity in her fingers and for this reason she could not learn to read Braille. A resourceful teacher finally hit upon the plan of having the child use her more acute tongue for feeling the raised dots of a Braille page. Through such individual teaching the child learned to read. This does not indicate, however, that sensitivity in the child's tongue was greater *because* she was blind. So far as neurology is concerned, there is no evidence whatsoever to support a claim for sensory compensation. Likewise, there is no reason for thinking that the blind as a group have any more musical ability than any similar group of seeing persons with an equal amount of musical training and intelligence.

The question is sometimes raised as to whether, through practice, blind individuals cannot develop skills that sighted persons cannot master. In the main the answer probably is that they cannot. They may, of course, develop skills through practice which they would not develop otherwise. As a matter of fact, they have to. In order to get about at all, they must observe some things that sighted individuals can afford to ignore. Teachers of the blind, however, sometimes remark that the failure to observe things around them is just as common among the blind as among the sighted. There are wide individual differences among the blind in habits of observation. This is of great importance in the education of blind children; that is, we must not take for granted their observation through sound, or touch, or smell.

In regard to the sense of touch, it is certainly true that the blind child under a modern system of education learns through drill and practice to do many things with his fingers that otherwise he would not do. He learns, for example, to read by feeling raised dots on the paper. We shall speak of the Braille system later. To those of us sighted individuals who have closed our eyes and tried to detect how many raised dots are under our finger, the task seems to require unusual powers. If the *need* were great enough, however, most of us could perhaps learn to do it as the blind do. It has been said that continuous reading of Braille tends to deaden sensitivity in the fingertips, but of this a psychologist is not competent to speak.

From testimony of the blind themselves, as well as from our knowledge of the functioning of the sense organs, it is evident that the blind do not detect color by touch, in spite of a common belief to the contrary. Of course, they can, with training and experience, learn to detect differences in fabrics, in coins, tools, fruits, flowers, and many other things. Also, through observation and experience, blind children learn early to recognize friends and distinguish between them and strangers largely through familiarity of voice.

Getting about. The ability of the blind to travel about is amazing. In the article by Farrell to which we have already referred, the testimony of several blind persons is cited relative to the cues which they use in finding their way about. New students at the Perkins Institution sometimes stop and clap their hands as they go about. By the reverberations they can tell whether or not they have reached the end of the walk. Sound plays an important role and for this reason traveling by night, when there is less interference from noises, is easier than traveling by day. Snow acts as a deterrent, since it deadens significant sounds. It is sometimes spoken of as "the blind man's fog." Several individuals quoted by Farrell report that they sense the distant curbstone before the near one. One deaf-blind student of Perkins reports more difficulty in getting around in her own house when it is very cold. Farrell also mentions the fact that, as skills in sensing objects and getting about are developing, there is usually an accompanying "flash of hope that sight is coming back."

Causes of blindness. The most frequent causes of blindness may be classed as heredity, disease, and accident. It has been estimated that about 11 per cent of blind persons have siblings or children who are also blind. Some schools for the blind have had several generations of the same family enrolled. Cataract and optic atrophy are closely associated with hereditary factors. Certain forms of progressive deterioration of the eye have a significantly high incidence among Jewish people. Hereditary influences have increased the number of the blind through consanguineous marriages and through blind-blind marriages. Scheidemann (94) quotes figures from the 1910 census which indicate that, for about 30,000 blind for whom records were reported, 2.4 per cent had parents who were first cousins. Even if this figure is somewhat too high, as some have claimed, the proportion of consanguineous marriages is nevertheless undoubtedly high for the group. Scheidemann (94) says: "The proportion of the blind with blind relatives is over three times as great among those whose parents were cousins as it is among the blind as a whole." In addition to consanguineous marriages through which the offspring receive a double dose of factors producing blindness, there are large numbers of marriages among the blind who are not related. Social and vocational propinquity and attendance at coeducational schools for the blind tend to bring about this state of affairs (5, 66, 67).

Disease, both hereditary and non-hereditary, contributes largely to the amount of blindness. *Gonococcus ophthalmia neonatorum* is sore eyes of the newly born caused by gonorrheal infection acquired as the infant passes through the birth canal of an infected mother. Since most states now have legislative enactments requiring that the attending physician or midwife administer silver nitrate or other appropriate medication to the eyes of all newly born children, the percentage of blindness from this cause is rapidly decreasing. Syphilis has added to the roster of the blind to an extent that justifies the current campaign against venereal disease. *Trachoma,* a contagious granulation of the conjunctiva, or "granulated eyelids," produces sore eyes which may eventuate in blindness. *Glaucoma* is caused by an increase in the fluids of the eyeball. The attendant pressure results in increased narrowing of the field of vision or often in complete blindness. Many of the infectious diseases of childhood produce impaired vision or blindness. Prominent among these are scarlet fever, measles, meningitis, diphtheria, and whooping cough. *Avitaminosis,* or lack of essential vitamins in the diet, is now known to affect vision deleteriously. Many other diseases in individual cases may have sequelae involving difficulties of vision.

Accidents add to the toll. Explosions of firecrackers, penetration of the eye by scissors, sticks, and other sharp objects, occur so frequently that preventive measures (such as not allowing little children to run with such articles in their hands) are certainly indicated. In some instances other foreign bodies, including drugs and poisons, produce blindness.

Myopia. Not only the blind child but also the child with impaired vision presents problems to the teacher, nurse, and social worker. Myopia or nearsightedness may be so extreme as almost to amount to blindness. Myopia may be progressive, in which case the end result may be blindness. Not all myopia, however, is progressive. The condition is brought about by an eye that is too long in the anterior-posterior axis. Rays of light from an object held in front of the eye pass through the various parts of the eye on their way to the *fovea centralis* on the back wall of the eye. The fovea is the place of keenest vision and is the place where rays of light *should* be brought to a sharp focus. In the myopic eye the rays, having too far to travel, come to a focus somewhere in the middle of the eyeball, diverge again, and reach the fovea with not all rays converged; the resulting image is blurred. The child naturally tries to pull the focal point back to where it ought to be, and in so doing, holds his book or other object very close to his eye. Fortunately, because he is usually able to do this, he is often recognized for what he is—a nearsighted child. Of course, where he is required to see work on the front blackboard from a seat in the back of the classroom, he may be unable to make the proper adjustment. The correction, where glasses are prescribed, is a concave lens.

Farsightedness (*hypermetropia* or *hyperopia*). Farsightedness is caused by an eye that is too short in its anterior-posterior axis. The rays of light pass through the various parts of the eye and reach the fovea without yet having come to a focus. If they could continue and penetrate the back of the eye, they would, theoretically, come to a focus inside the head somewhere. The farsighted child desires to bring the focal point farther front; therefore he extends his arm and holds the observed object at a great distance from his eyes. When doing close work, he may be detected easily, but in work not involving close adjustment, he may go undetected for a long time. He is probably subject to more headache and eyestrain than the nearsighted child because he constantly has to adjust for both near and far vision. The lenses prescribed by the doctor are convex.

Astigmatism. Astigmatism is a condition in which the various meridians of the eye have different degrees of curvature. In other words, the eye is nearsighted on one meridian, normal on another, and farsighted on another. Obviously then, the glasses which the doctor prescribes must be so ground as to give one correction on one axis and another on another axis. Astigmatism often accompanies an essential nearsightedness or farsightedness. Because of his inability to get a clear focus on anything, without correction through glasses, the astigmatic child is likely to be very restless.

Strabismus and *muscular difficulties.* In addition to the conditions caused by errors of refraction, there are muscular difficulties. *Strabismus* or squint, one form of which is cross-eyedness, may be a muscular difficulty, but it may also be caused by failure in infancy to develop ability to focus the two eyes together, or by refractive errors such as near sight in one eye (112). The social and psychological results of cross-eyedness, to say nothing of the physical, are so great that it would appear that every child so afflicted is entitled to treatment. Surgery may be used by the doctor. Fortunately, however, the last few years have seen the development of orthoptic exercises by means of which much can be done without resort to surgery. Some articles in the current literature seem to indicate less optimism about the results of orthoptic training than was originally expressed. *Muscular inefficiency* and *muscular imbalance* cause other difficulties which cannot be discussed here.

Aniseikonia. Aniseikonia is difficulty in which one has unequal retinal images—that is, there is a difference in the size of the image of the thing looked at in the right and the left eye. This condition can cause considerable difficulty, but, strangely enough, has been known for only a relatively short time.

Color blindness. Color blindness is of interest chiefly because it presents certain vocational hazards. Children may also be handicapped sometimes in art work in school because of color blindness. The condition is found in about three or four per cent of males and in less than one per cent of females. Color blindness must not, of course, be confused with *color ignorance.* If figures on color ignorance were included, the percentage of males so involved would be much higher. Color blindness is a condition resulting from some anomaly of certain nerve cells called *cones,* in the retina of the eye, whose business it is to give us color perception. Little can be done to correct the essential eye defect, but through experience the color-blind individual may learn secondary criteria of color. For instance, a color-blind child may not actually *see* grass as green, but he may learn to *call* it green. Red-green color blindness is most common.

Word blindness. Occasionally one finds a child who seems able to see most of the objects in his environment but is unable to recognize or understand visual symbols. As a rule, such children can *see* the symbol, but it conveys no meaning. Sometimes the defect is restricted to *certain* symbols. The writer once had a student in a psychology class who, as a child, had suffered from a slightly different type of difficulty. Throughout the grades of the elementary schools, he had been unable to *see* the printed numeral 7. In his own words, "If it had been a cliff I should have walked right over it for I could not see it." The space was utterly blank. One can imagine the troubles the child must have had with arithmetic before his condition was discovered. One can also imagine the difficulty of *discovering* the failing. We cannot go into the arguments in which authorities in this field have indulged as to whether word blindness (visual aphasia, dyslexia, and alexia being different degrees of the same thing) is a congenital defect caused by a definitely localized brain lesion. Suffice it to say that modern methods of handling reading disability cases have shown us that there is perhaps less need for the concept with its attendant hopelessness than was formerly thought.

Mirror writing. In this connection, it might be well to mention *mirror writing,* a fairly unusual condition which has received much newspaper publicity of late. Words and figures are written with right-left relations reversed so that the result can be read only if held before a mirror. Decidedly left-handed children and children with a severe degree of mental defect provide more mirror writers than does the normal child population. The cause or causes of mirror writing have furnished material for much psychological argument. Professional workers as a rule, however, need only refer such a child to a clinical psychologist and leave the responsibility there.

Nystagmus. Nystagmus is a condition in which there are involuntary movements of the eyes in different directions. It occurs frequently in color-blind individuals and in albinos.

Albinism is an anomaly, often familial, characterized by the absence of pigment in the skin, hair, and eyes. Albinos consequently do not see well in the daytime *(photophobia).*

The deaf-blind. The case of the deaf-blind child is pathetically baffling (94, 66). Obviously, individual factors and circumstances must be considered in all such instances before social and educational recommendations can be made (24, 90). The life and education of Helen Keller and of Laura Bridgeman have long been classics in the literature of such sensory deprivation. The education of the former was tutorial and that of the latter was institutional. Merry (66) inclines to the opinion that, where mental retardation exists in such cases, a greater share of the deprivation has been caused by the deafness than by the blindness. Goodenough (27) gives an interesting account of the expression of emotion by a blind-deaf child.

Body posture. In addition to the difficulties of vision itself caused by eye defects, we should note that various anomalies of bodily posture or of the use of the eyes may also occur. A child may suppress vision in one eye almost entirely or he may hold his head in a peculiar position in order to facilitate vision. According to Holt (38), *torticollis* or *wryneck* may be caused by a child's holding his head and neck in such a way as to get clearer vision.

Measurements of visual acuity. Because clinic reports so often carry statements about a child's vision, it is necessary that we understand some of the terms used. A common test of visual acuity is made by the use of charts of various kinds placed on the wall, from which the child is required to read (if old enough), or otherwise to indicate, what he sees. The Snellen chart is a familiar example. Symbols of varying sizes are placed in different rows, each row being numbered to indicate the number of feet from which the normal eye can see the line with ease. Because of convenience and convention, the child is usually seated twenty feet away from the chart. Twenty, then, becomes the numerator of a fraction used in reporting the child's vision. (If the distance is other than twenty, then the figure indicating the distance is used as the numerator.) The smallest line of symbols which the child can see clearly is noted. The distance from which the normal eye could read this same line of symbols becomes the denominator of the fraction; $\frac{20}{20}$ then means that the child, at twenty feet from the chart, can see the smallest line of symbols which a normal eye can see at that distance. Suppose the report on a child's right eye is $\frac{20}{30}$. This means that his right eye at a distance of twenty feet from the chart can see clearly the line of symbols which the normal eye can see at thirty feet. If for either eye the report is $\frac{20}{15}$, it means that with that eye, at a distance of 20 feet, the child can see symbols which the normal eye can see no farther than 15 feet away.

According to current practice in this country, the *value* of the fraction does not indicate the fraction of vision which the child has. For example, $\frac{20}{40}$ would not mean one-half vision. (It should be noted, however, that by the International Acuity Rating, this meaning *is* put into the fraction.) The following gives some examples from the American Medical Association Efficiency Rating, which is the one most generally used in this country. According to this scale, the fraction indicates per cent of vision.

Fraction	*Per Cent of Vision Indicated*
$\frac{20}{400}$	3.3%
$\frac{20}{200}$	20%
$\frac{20}{100}$	48.9%
$\frac{20}{70}$	63.8%
$\frac{20}{50}$	76.3%
$\frac{20}{40}$	83.6%
$\frac{20}{30}$	91.4%
$\frac{20}{25}$	95.6%
$\frac{20}{20}$	100%

An individual with vision of $\frac{20}{200}$ or less is considered to be industrially blind.

Clinic reports more recently have contained other information concerning vision, particularly as related to reading ability. The technical devices by which eye movements in reading are recorded and measured cannot be explained in detail here. The Keystone Ophthalmic Telebinocular is a device patterned somewhat after the old stereopticons. Measurements, by its use, give information on binocular acuity, acuity of each eye separately, depth perception, vertical and lateral imbalance, binocular vision, and near and far point fusion.

Schools for children with eye defects. In arranging for the education of children with serious eye defects, there are two diagnoses that must be made before rational plans can be formulated. One diagnosis is the degree of the defect. A totally blind child or a child who can see little more than light and dark will require a type of education which does not depend upon the printed page. Less than $\frac{20}{200}$ vision usually indicates the need for education in schools or classes for the blind. On the other hand, the child who does not have vision sufficient to enable him to attend regular classes but who can, under expert supervision, be allowed to use his eyes for some reading can be put into a *sight-saving class* (53, 54, 62, 63).

A second diagnosis that must be made is the degree of the child's intelligence. In the past, the determination of the intelligence of blind children was difficult, inasmuch as most intelligence tests require the use of vision. A blind child is penalized even on performance tests unless one makes allowance for the greater time that the blind child necessarily requires in handling objects he cannot see. Hayes (34) published in 1930 a revision of the Stanford-Binet Test adapted to use with the blind and a more recent one in 1943 (31).

Suppose a child is both blind and feeble-minded. It is easy to see why schools for the blind feel justified in trying to restrict their enrollment to blind children of at least normal intelligence. Most of us would probably agree with this policy. While it is true that provisions for the feeble-minded in many states are woefully inadequate, yet whatever provisions are available for the feeble-minded should be extended to the feeble-minded with sensory defects. The Royer-Greaves School in Pennsylvania is one that provides special training for the blind who are mentally retarded.

Education of the blind. Residential schools for the blind may have all the advantages and all the disadvantages inherent in any school which segregates a group of students from normal home life. Both methods of instructing the blind are being used in one place or another. The current trend, however, seems definitely in favor of day schools (2, 5, 59, 60, 61, 67). In either case, the typewriter is an important tool of education. Achievement tests adapted for use with the blind are being developed (15, 64).

The reading and writing of totally blind children is done by means of the Braille system. The device by which the *writing* is done is a small metal tablet with "cells" or groups of six small perforations arranged thus: ⠿ Each perforation is known by a number. By combining 1, 3, 4, for example, or 2, 4, 6, and so forth, a total of 63 combinations of perforations or "signs" can be formed. The tablet is put over a piece of paper, and a stylus is pushed through the appropriate perforation or perforations, working from *right* to *left.* This is *writing* by the Braille system. In *reading,* the paper is turned over and the perforations then become raised dots. These can be read by passing the tip of the finger lightly over the dots. Reading proceeds from *left* to *right.* Obviously, individual differences in skill in both reading and writing Braille occur among blind children, just as they do in script writing or in the reading of print among sighted children. Some expert Braille readers "read ahead," thus using two hands rather than one. It is claimed by some experts in the field that many improvements in the teaching of Braille reading and writing have been, and others should be, made, just as methods of teaching reading to sighted children have improved within recent years. Such questions involve actual movement of the fingers over the Braille table, elimination of inner speech, position of body, getting rid of tenseness, the height and shape of the dot, and other questions (67).

Braille himself must have been a man of great intelligence. Barrett (3) tells us that Braille blinded himself with an awl at the age of three. This may be the reason that he used the awl in doing the writing that has been named for him. Barrett further says that Braille corrected three theories in regard to the education of the blind which up until his time had greatly impeded adequate training. These ideas had been, according to Barrett, that the sole purpose of education for the blind was religious; that the blind must be educated along with the sighted; and that the blind must write a script that could be read both by themselves and by seeing persons (30, 62, 63).

Sight-saving classes. The purpose of sight-saving classes established now in many cities is twofold. The children are taught in the regular school system but under highly favorable conditions; at the same time, they are taught how to conserve their sight. Mental hygiene and behavior are likely to improve after a child with seriously impaired vision is put under conditions of less eyestrain in such classes. Much instruction is oral and the children are taught to use the typewriter. Special maps and globes are provided. Details (and controversies) over size of print and kinds of paper and pencil cannot be considered here but reference may be made to 2, 20, 50, 58, 62, 67, 69, 101.

Service to children with defective vision. What are the services that teachers, nurses, and social workers particularly can render to the 15,000 or more blind children under 20 years of age in the United States and to the 50,000 partially seeing children (9)? Probably one of the first services is to *become familiar with the obvious signs of eye defect.* This does not mean diagnosis. It means, rather, that we must be alert in referring children with eye symptoms to medically trained persons for diagnosis. Some of the more obvious indications of eye trouble in children are: missing small words in reading; skipping lines; holding objects at unusual distances or unusual angles; constantly holding the head in an unusual position; bumping into things; red, watery, inflamed eyeballs or crusted eyelids; unusual dilation of the pupil of the eye; eyebrows constantly knitted and forehead drawn; blinking and batting of the eyes; frequent headache and nausea.

Another service that can be offered by professional workers lies in the field of *prevention*. Best (5) believes that 72 per cent of blindness is preventable. Public health nurses are in a strategic position for training parents and children in the care of the eyes, particularly following infectious diseases. It is very hard for both parents and children to realize that after the first discomfort of measles is over, for example, great care of the eyes is still necessary if life-long handicaps are to be avoided. Clinical services, of course, are often needed also; professional workers can arrange for these.

Prevention sometimes involves removal of a sightless eye in order to prevent sympathetic inflammation in the good eye. Work with parents in such cases requires great professional skill such as is possessed perhaps only by a worker trained in this particular field. The early correction of squint in order to prevent further difficulty, the adoption of a particular diet for the correction of certain eye difficulties, and the purchases of glasses all require great professional skill if the worker is to secure parental coöperation.

A third service is in helping to arrange for *educational opportunities* after diagnosis has been made. The White House Conference of 1930 (110) estimated that schools and classes for the blind were enrolling only about 5,900 children and that not more than 425 of these were in day-school classes. "It is certain that some of those 5,500 in the residential schools might more properly be assigned to sight-saving classes" (110). In small towns or rural communities, such service is sometimes very difficult to find. To determine what services are available, recourse should be made to the local or state departments of education or to some of the agencies particularly set up for the blind and partially sighted.

Another type of service is working with the family of the blind child to insure the *proper kind of home training*. The child with a defect of any kind is likely either to be ignored to the point of being improperly cared for or to be pampered to the point of failure to grow into a reasonably self-sustaining individual with good mental hygiene.

The blind child needs to be talked to more than a sighted child, and he needs as much sensory experience through sound, touch, and feeling as can be given him. Providing as rich and full mental content as possible for the blind child helps to prevent the passivity and immobility of countenance and posture so often noted in the blind. He must be taught to find his way around his own home and to attend to as many as possible of the daily routines as are necessary for his own well-being. It has been suggested, and wisely so, that the Doll Test of Social Maturity (see Chapter XII) should be used regularly with blind children in order to see whether they are developing social competence (68). It seems only reasonable in this connection to say that the blind should also be taught what they *cannot* do. Many of the blind take unwarranted risks partly perhaps because of necessity, but also partly because of an unwillingness to admit limitations. Initiative, yes, but tempered with caution and reasonable restraint.

The case worker or visiting nurse may occasionally work with a child whose eye has had to be removed. Fortunately, artificial eyes of the present are vastly superior to those of the past, and the professional worker in any given community should know what resources are available for help in this direction. Many cities provide artificial eyes to those children whose parents cannot afford to buy them. As the child grows older, he will, of course, need to have an artificial eye that is appropriate for his head measurements.

A former student of the writer came into her office recently. She wanted help for a friend who is the mother of a baby that will be almost if not entirely blind from a condition which no medical help can relieve. The caller felt that the mother should be talking to the child a great deal and should be given help in advance in knowing how to meet the child's problems. Her question to the writer was whether and where there was such help for the mother. A telephone call to the local league for services to the blind brought the following reply: "Oh, yes, we provide just such help. Miss —— does much of this work and will be very glad to work along with the mother." Any society that gives such service to the unfortunate cannot be altogether callous or selfish or greedy! (97a).

Another service is the prevention of other *psychological mechanisms* that must be reckoned with. It is natural for a blind child, as for any other, to develop compensatory mechanisms of one kind or another in order to maintain status and defend the ego. Not only does the blind child suffer from the natural deprivations imposed by his handicap, but he may even be taunted about it and be called "old squint," "four eyes," or "whitey" (in the case of albinos). One of the social compensations to which some blind children resort is a kind of boisterous nonchalance intended to give the impression of ease and poise. Good mental-hygiene training can prevent such behavior (2, 13, 32, 74).

In addition to the factors already mentioned, there are what have, unfortunately, been spoken of as "blindisms." The term refers to the more or less useless and habitual mannerisms many blind persons develop. These mannerisms include holding the head in peculiar positions, rocking the body back and forth, putting the fingers into the eyes or rubbing the eyes, twirling rapidly around, and shaking the fingers before the face. The professional worker can help here, just as he or she does in preventing nail-biting or thumb-sucking in any child (67). It should be noted also that many blind children have speech defects. They should be given an opportunity for speech correction.

Help in *occupational selection* and *vocational training* for the blind is a service for which, as a class, they have great need. It has been estimated that less than eight per cent of the blind over ten years of age are self-supporting (5). Social and educational lag is undoubtedly keeping many blind persons in occupational fields first developed for the blind but now overcrowded. Many are still making articles long since replaced by factory-made products. For those professional workers who have the problem of vocational guidance of blind children to meet, help may be found in references 5, 14, 93, 111.

A great problem for both blind and partially seeing children is that of *recreation, sports,* and *entertainment.* Some blind youths play baseball and golf with considerable skill and with great enjoyment. A very acute phase of the question is that of the brilliant child with partial sight, who must not be allowed to use his eyes for much reading. The life of Helen Keller, deprived of both sight and hearing, illustrates the fact that even such a life can be rich with enjoyment. It will be recalled that Miss Keller takes keen delight in the feel of things and in their odor. Houses and human beings to her have characteristic odors accompanied by all the feeling tone that sighted persons have for faces or other loved objects. Music, which was not accessible as sound to Miss Keller, is possible for most blind children. Nature study, in a somewhat different form from the one to which most of us are accustomed, offers another outlet. Speaking books are now on the market. References 2, 53, 60, 61, 62, 65, 69, 87, 97 will be found helpful in locating recreational sources for blind or partially sighted children. There are also magazines published in Braille for children (94).

Certainly one thing that any professional worker should be able to do is to know where to turn for help with specialized cases or how to go about finding help. For the blind there are several national agencies constantly doing research, publishing findings, and supplying information. For lists of these agencies consult references 2, 58, 61, 67, 87.

Hearing Defects

The child with defective hearing. One has only to think of the amount of one's life that depends upon speech communication with others to realize to some degree the deprivation which the hard-of-hearing suffer. The inability to hear music, lectures, talkies, or sermons is perhaps less significant than the inability to hear ordinary conversation. When we think that some children have never heard human speech and that many others have heard it with great difficulty and little accuracy, we realize that deafness in children is in reality a double handicap. Children who have never heard human speech normally *not only* are deprived of the information which such speech would give them, but, what is just as important, they do not learn the means by which they can *express their own thoughts.* To add to the tragedy, there is the fact that defective hearing so often is not detected for a long time. Obviously, the child who has never had normal hearing does not know there is anything wrong with him. The failure of a hard-of-hearing child to respond to requests or commands of adults is often interpreted as stubbornness (72). Later, when the child with defective hearing begins to mingle with other children and to go to school, his facial expression and his lack of participation in conversation or class work is often confused with intellectual defectiveness. In this respect the hypacousic child is even less fortunate than the blind or partially sighted child. Eye defects, for the most part, are more easily recognized by others than are defects of hearing. Difficult as the situation is, nevertheless, the lot of the deaf is infinitely better today than formerly (26, 42, 45, 47, 102, 110). Improvement in detection, examination, and training can be appreciated when we contrast two cases. One was a deaf young man who, some years back, was confined in an asylum for dangerous criminals just because no one seemed able to work out any other plan for him. The other is a deaf man who passed a two-hour oral examination by lip-reading and completed all other work required for a Ph.D. degree in one of our eastern colleges a few years ago. Interesting accounts of some of the specific problems of the deaf and the history of their training can be found in references 6, 25, 26, and 47.

Terminology. A little reading on the subject of the deaf convinces one that the literature and statistics are quite confusing. Definitions, for example, vary greatly from one authority to another. *Deafness* is defined in Dorland's *Medical Dictionary* as lack or loss, complete or partial, of the sense of hearing. This is probably the use most familiar to the laity. The loss of hearing is more frequently partial than total. It may vary from one ear to the other. The loss is usually much greater via air conduction than via bone conduction. Some authorities, including the White House Conference (110), reserve the word *deaf* for those whose hearing is such as to "prevent the establishment of speech and natural language." This distinction then defines the *hard-of-hearing* as "those who established speech and ability to understand speech and language, and subsequently developed impairment of hearing." This usage makes the distinction between the deaf and the hard-of-hearing not upon the degree of the sensory loss but rather upon the amount of language and speech acquired before the beginning of the loss of hearing. We shall not confine ourselves here to this distinction.

Probably because of difference in use of terms and in accuracy of measurement, statistics on the number of deaf or hard-of-hearing children and adults have varied greatly from one authority to another. It seems safe to say, however, that there are close to 3,000,000 children in this country with impaired hearing and about 300,000 whose hearing is so poor as to require special educational methods.

Cases of *word deafness* are reported in the literature (48, 92).

Causes of deafness. Deafness may be either inherited or acquired. Congenital deafness is probably inherited deafness in most cases, although prenatal accidents or birth injury could conceivably produce it also. Family histories of deaf children show a disproportionately large number of records of syphilis, epilepsy, and alcoholism (86). More genetic studies are needed in this field, however, before definite conclusions can be reached as to inherited causal factors.

As for acquired deafness, the most frequent causes seem to be scarlet fever, measles, whooping cough, mumps, meningitis, diphtheria, tonsillitis, catarrhal colds, mastoiditis, and otitis media. Any disease accompanied by high fever and infection of nose, throat, or brain is suspect. Accidents and blows are responsible in individual cases. Certain types of avitaminosis also are responsible for loss of hearing.

Foreign bodies are put into the ear quite commonly by children and may cause deafness before parents realize what has happened. The removal of the object may cause the deafness to disappear. The frequency of such preventable accidents has caused otologists to formulate the prescription, "Never put anything into your ear except your elbow."

For some unknown reason, certain individuals either have more earwax, or cerumen, than others, or else it dislodges and comes out of their ears less easily. Such persons may have pain and loss of hearing until the accumulation of cerumen is removed by a doctor. This process may have to be repeated frequently. In no case should it be done except by a physician. In fact, in no other field is adequate medical diagnosis, care, and prevention more imperative than in regard to ear difficulties. As matters stand at present, much more is known about the prevention than about the cure of deafness (4, 18, 38, 47).

Signs of hearing loss. Any teacher, nurse, or case worker who has become sensitized to the problem can and should recognize certain of the more obvious signs of hearing difficulty. Earache can be detected even in young babies who hold their heads peculiarly or insistently turn one ear to the pillow. Children who complain of earaches should be given immediate medical attention. Discharging ears must be kept clean, according to doctor's directions. Imperfect speech, poor spelling, inattention to what is going on around, dull and listless facial expression, peculiar head posture, mouth breathing, unsocial attitudes, frequently asking to have things repeated, peculiar tone of voice, complaints of ringing and others noises in the head or ears are so obvious that they should never be overlooked as symptoms of hearing difficulty.

Tests of hearing. Many public schools and clinics make a rough sorting of hearing defects before medical help is secured or more adequate examination is asked for. Directions for administering the *watch test* and the *whisper test* may be found in references 52 and 94. Snappers and tuning forks are sometimes used also in these preliminary examinations. Audiometers are in use in many schools. Electrically induced bell-like sounds can be heard through some of these. Through others, male and female voices may be heard dictating numbers which the children are asked to write down. Some audiometers are for individual examination and some are so arranged with sets of headphones that as many as forty children can be examined at one time. By the use of certain types of audiometers, it is also possible to tell at what points in the pitch range the child's hearing is most defective. Such analysis is very helpful in cases where children have difficulty in hearing some tones but not others, or where they react peculiarly to certain noises.

Aldrich (1) has suggested a promising technique for determining ability to hear. A newborn child did not respond normally to noises, and deafness was feared. A conditioning experiment was tried in which a bell was rung as the infant's foot was being scratched. The normal foot reflex became conditioned to the sound of the bell and occurred when the bell was rung even though the foot was not being stimulated. This was taken to indicate that sound must have been perceived by the infant. Undoubtedly this technique, with modifications, could be used with older children also.

In this connection it may be well to call attention to the fact that examination of ears is one thing and examination of hearing is quite a different thing. In the writer's experience it is not an uncommon thing to examine a young deaf child whose parents bring a medical report saying "hearing normal." What happens in such cases, apparently, is that the child is not talking and does not understand speech (which he has never heard) and therefore cannot coöperate in an examination by audiometer. The use of the audiometer requires that the child understand directions as to what he is to do when and if he hears certain sounds through the earphones connected with the audiometer. If the child does not understand these directions, obviously he cannot and does not indicate whether or not he hears the sound. The only thing left for many examiners to do under such circumstances is to examine the ears. The cause of the hearing loss may not be in the ear at all, but may be in the auditory nerve or the auditory centers of the brain. *Actually* there are many things one can do in such cases to determine whether or not the child hears. Close observation of his behavior will usually give many clues. Some schools for the deaf even have pairs of toys—one toy an exact duplicate of the other except that one telephone or one doll or one ball makes a sound, while the other one of the pair does not. The hearing child will usually very quickly show his preference for one of the pair over the other, whereas to the deaf child the two toys are exactly alike. Whether or not the child likes to engage in activities such as pounding, scraping, scratching, or hammering often indicates that he is or is not hearing the accompanying sounds. His response to the human voice from different angles, his behavior in regard to his own name, and many, many other everyday home situations can be made very revealing in this respect. The fact that the child likes to have the radio turned on and that he seems to sense the overhead passage of an airplane may be significant only of his *feeling* vibrations rather than hearing them.

The intelligence of deaf children. Much study has been made of the intelligence of deaf children (28, 51, 56, 57, 75, 81, 88). On the whole, these studies have indicated that the general intelligence level of deaf children is considerably lower than that of hearing children. Cause and effect are inextricably involved in so many of these cases, however, that proportional responsibility is hard to determine. In some cases, the poor heredity which was responsible for the hearing defect is probably likewise responsible for defective intelligence. In other cases, the infectious disease which resulted in deafness may also have caused brain damage. In still other cases, the deafness may have shut off so many opportunities for learning that *intelligence* and *education* are hard to distinguish (44). This last factor is responsible for the standardization of *performance tests* for use with deaf children (51). The same difficulties of analysis arise in connection with the use of *achievement tests* of school subject matter, by the use of which deaf children have been found, on the average, to be considerably below the average of hearing children of the same age.

The speech of deaf children. As already mentioned, the acquisition of speech is greatly curtailed by loss of hearing. For this reason, deaf children have many peculiarities of speech. Sounds are improperly made; pitch and modulation are far from normal. It would appear that the amount of residual hearing is of great importance at this point. When a child has enough hearing actually to hear the human voice, certainly peculiarities of his own speech can and should be corrected. When a child has no hearing or so little that he will never be able to speak normally, one wonders how much value there is in speech training. Some teachers claim, however, that such training is necessary in order to appreciate the spoken word and to develop an appreciation of literature. Sometimes totally deaf children who, by painstaking effort on the part of teachers, have been taught to "speak" suffer great disappointment when they go among hearing people and realize that they cannot make themselves understood at all. For untrained ears, it is quite difficult to understand the speech acquired by totally deaf persons (41).

Methods of instruction. Lip reading (or speech reading, as it is also called) is the understanding of spoken words by watching the movements of the lips and the face of the speaker. This type of training is of great importance and is often begun with children who have progressive deafness, long before their hearing is entirely lost (25, 44, 73, 108, 109).

In contrast to the oral method of learning to speak and to lip-read, there is the so-called manual method of instruction. This consists of signs by the hands, of gestures and pantomime. The merits of these two contrasting systems of instruction have led to much controversy. The oral method seems to segregate the deaf less from normal individuals. It is difficult, however, and seems to require a higher degree of intelligence for mastery. Deaf persons of low intelligence seem unable to learn by oral methods and resort to manual speech in spite of efforts to prevent their doing so. The superintendent of a school for deaf once said to the writer: "Sign language will be picked up anyhow. There is a fascination about it for the deaf. Although we use oral methods in the classroom, yet we find the children using sign language on the playground. *We do not punish them for it* as some schools do." (10, 39, 41, 71, 94, 105).

Schools for the deaf. The same question as to the relative merits of day schools and boarding schools arises in the case of the deaf as in the case of the blind (17, 44, 106). The trend, however, seems to be in the direction of keeping deaf or hard-of-hearing children with normal children as much as possible. For this reason, many public schools have special rooms and special teachers for children with seriously impaired hearing. Even where boarding schools are maintained, control by the state department of education is becoming more common. Where the public schools do not offer specialized instruction for deaf children, as is largely true in rural areas, boarding schools may continue to be necessary for some time. Insofar as possible, however, we should want deaf children to have as many social contacts with normal individuals as possible, to have every opportunity to use what residual hearing they may have, to learn lip reading, and to have as wide an educational program as they can utilize. Higher education for the deaf can be obtained at Gallaudet College, in Washington, D. C.

Stewart (103), herself deaf since 14, feels that deaf persons should be taught to be well-balanced deaf persons and not imitations of hearing ones. She claims that the deaf will find their optimum social adjustment among the deaf. Perhaps not all deaf persons feel this way.

Parents of deaf children will read with interest the accounts of Mr. and Mrs. Spencer Tracy's success in the education of their deaf son (*Colliers,* July 14, 1945, page 567).

Personality of the deaf. While the deaf display individual differences among themselves, just as all human beings do, yet there are certain personality hazards to which they are more subject than are those with normal hearing. Many hard-of-hearing adults compensate for their inability to hear others by monopolizing the conversation themselves. Some make queer throaty noises of which they are unconscious until someone calls their attention to the fact frequently enough that they sense what their muscles are doing even though they still do not hear the sound. Others, in their embarrassment and confusion, fuss with books or papers or fans, to the annoyance of those near them, in such places as church, for example. Some will do almost anything to conceal from others the fact that they are not hearing. Interestingly enough, however, reports from certain foreign countries indicate that the deaf there are wearing a kind of insignia which indicates their deafness and the necessity for others to take it into account.

It is easy to understand why a child who, in the midst of people who are talking and laughing, hears nothing of what is going on has to meet the situation in some way, either desirable or undesirable. The lip-reading child, the child who has been treated with consideration, the child who has confidence in people, may meet such situations with a fine balance of participation, on the one hand, and of acceptance of limitations, on the other hand. In contrast, the child who knows absolutely nothing of what is going on around him, who may have experienced humiliating ridicule, or whose life experiences have not been such as to establish confidence in people is very likely to become suspicious, fearful, timid, depressed, resentful, or seclusive. These evidences of bad mental hygiene are very frequent among the deaf, but there is no reason for thinking they are inevitable. They are important, however, as indicating points of stress where careful training is necessary (10, 12, 18, 21, 29, 36, 55, 72, 79, 80, 81, 82, 83, 84, 94, 96, 98, 103).

Vocational education for the deaf. In 1936, a study on occupations of deaf adults appeared (59). This study was made possible by a Civil Works Administration grant. Nearly 2,000 deaf adults were contacted in 27 states. Fifty per cent of these were employed at the time. One-sixth of them were occupied in a trade they had learned in schools for the deaf. Such a large number were in work classified as unskilled labor that Miss Martens raises the question as to whether a better program of vocational training and vocational guidance is not needed. Individual aptitudes, mastery of speech, and avoidance of occupational hazards must, of course, be considered (7, 70).

Service of professional workers to the hard-of-hearing child. Emphasis has already been put upon the importance of *preventive treatment* in cases of hearing defect. Nurses, teachers, social workers, and others often find themselves in a position to suggest and urge early medical examination and care for children under such circumstances. This implies, of course, early detection of ear difficulties (78).

In school, teachers can be on the alert for all the evidences of difficulty that we have already mentioned. Sometimes the next step is referral to the school nurse or school doctor. Where such service is not available, the matter should be referred to the home, and parents should be encouraged at first and later forced, if necessary, to provide medical care. Teachers can also sometimes refer individual children to a special teacher for lip-reading instruction. If the child is learning lip reading, he should be seated in school in such a place as will make it possible for him to observe the teacher's face with ease. Cooperation of parents in providing lip-reading training must also be secured, sometimes with more or less difficulty (70).

The prevention of personality defects is implied in what we have already said. Mannerisms should be prevented and all possible help should be given the hard-of-hearing child to develop fine mental hygiene. He must be taught to *listen* to others, to take his turn, to realize his strengths and his weaknesses, to enjoy people, and to develop recreational skills. Help on all such points can be secured by professional workers and by parents who are familiar with the societies, organizations, and publications devoted to problems of the deaf. There is no dearth of sources in the field. The American Association to Promote the Teaching of Speech to the Deaf, The American Society for the Hard-of-Hearing, and the Volta Bureau are all located in Washington, D. C. (7, 8, 10, 12, 22, 26, 29, 59, 70, 71, 72, 79, 99).

Hearing aids have been improved considerably within recent years (23, 40, 76). Perhaps professional workers will be able to investigate hearing-aid possibilities for deaf children in their practice. Perhaps, too, they can help to build up on the part of the public as great a social acceptance of hearing aids as there now is for glasses.

Occasionally, professional workers come in contact with families where the parents both have acquired deafness and may have met in a school for the deaf. Marriage often occurs among students from such institutions. Suppose, then, the parents are both deaf and do not use speech at all. Obviously, if their defect is acquired rather than hereditary, their children will not have the defect. What are the chances for a child of normal hearing in a home where the parents do not speak? A magazine article a few years ago told of a baby in such a home. The aunt who reported the case spoke of the very early age at which the baby learned not to cry for what he needed. His parents did not hear his cries, but if at night he fussed around and moved in his little bed, which was pulled close to his mother's bed, she would detect the movement and attend to the baby. Obviously, if the parents do not speak, speech will be greatly delayed in the children of the home. In fact, they would never learn to speak if they were not put in contact with others who do speak. It seems absolutely necessary in such cases that some means be found by which the child in the second year of his life at the latest may be talked to and taught to speak himself.

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CHAPTER XVII

SPEECH-DEFECTIVE AND CRIPPLED CHILDREN

Speech Defects and Other Expressional Difficulties

The importance of easy speech. It is possible for everyone to recall instances in his own life when speech did not come as easily as he might have wished. The nurse may think that she always speaks most poorly in the presence of the physician. The social worker may feel that she talks more easily with her clients than with her supervisor. Everyone talks more freely with certain friends or in certain social situations than others. If this is true with those of us who have reasonably normal speech, it is easy to imagine, in part at least, the disrupting effect of emotional situations upon those with severe speech handicaps. Rogers (66) quotes from a letter written by Charles Kingsley, who was a stammerer all his life. Kingsley tells of avoiding "introduction to men to whom (I could see by one mesmeric glance) I should inevitably stammer." Kingsley furthermore thought that stammering shortens the life span of the afflicted one because "his continual depression of spirits wears out body as well as mind." How often do speech-defective children avoid people and situations that are likely to make them stutter? For other biographical examples of the emotion caused by stuttering, the reader should examine reference 6.

Even the most poised among us may prefer to stand beside or behind a table when addressing an audience. Some college professors declare that they cannot talk without a piece of crayon in their hand. An exaggerated degree of the same thing is the so-called *ritual stuttering.* This refers to the experience of those stutterers who have no difficulty in speaking if they go through a certain ritual—hands in pockets, hand on a certain part of the apparel, body in a certain position. Some stutterers prevaricate in order to answer by the use of words upon which they do not stutter, thus avoiding the more truthful ones upon which they do stutter. Who can blame them?

For some reason, speech defects do not make the appeal to our sympathies that most other defects or deformities do. In fact, speech defects form a part of the stock in trade of comedians, and the cinema capitalizes on impediments of speech as a sure way to arouse laughter from the audience. One cannot help wondering how a sensitive child with a speech defect must feel as he sits in a theater and hears the gales of laughter that greet the lisping or stuttering comedian.

Many children feel that a marked speech defect is a much greater handicap than blindness, deafness, or lameness; socially, this may be true. That breakdown and failure do not always result from speech difficulties, witness Demosthenes, Aristotle, Virgil, Lamb, Erasmus, Darwin, and Moses, who was "slow of speech and of a slow tongue" (68).

Fortunately, *some* children, either through a divinely bestowed disposition or through wise handling, do not develop, or at any rate do not display, great sensitivity over their speech defects. In fact, some children with mild speech defects are utterly unaware that their speech is different from that of their companions. The writer has had frequent experiences with college students who expressed genuine surprise when told about certain minor speech defects which they should correct before expecting to go into professional work. In almost every instance, they have said they had never been told before that they had any peculiarity of speech. Some have come back with reports from home to the effect that the parents had never been conscious of the defect either. These are usually, it must be said, slight degrees of lisp, slurring of certain syllables, confusion of *n* and *ng* sounds, and an infantile hangover of *w* for *l*. One even finds that some of one's professional colleagues speak of "cowege classes" and "cowege curricuum" for "college classes" and "college curriculum." The writer remembers, with considerable embarrassment, her inability to understand what a professional man was saying, on one occasion, as he talked about a book which he called "How to Wive the Fuwwer Wife." Why had not some teacher, relative, friend, or professor taught that man how to make the sound of the letter "l"? Perhaps one reason that so many remediable speech defects go uncorrected is that many persons are not highly sensitized to articulation. In fact, most of us have, at one time or other in life, been told of some more or less common word which we habitually mispronounce, of which error we had been entirely unconscious. Many persons who know how to *spell* open, apron, children, quote, battery, and veteran, nevertheless *say* ompen, ampron, childern, kote, battry, and vetran.

The incidence of speech defects. There are no very reliable estimates as to the number of children with serious speech defects. Bender (6) estimates that there are at least 1,350,000 men, women, and children in the United States who stutter. Examination methods, diagnoses, and classifications differ so from community to community that about all we know is that from several hundred thousand to a million or more children so handicapped are not at all adequately provided with remedial measures either in school or out of school. Defects of articulation are commonest, followed in order by stuttering, structural defects, and peculiarities of voice such as nasality and huskiness. Both stuttering and lisping are much commoner among boys than among girls, and among Negro children than among white children (41).

Speech and intelligence. In an earlier chapter, mention was made of the fact that speech begins in children of superior mentality earlier than in mentally defective children. The question then arises as to whether there are more speech defects among subnormal than among average and above-average children. The answer is affirmative. The lowest grade of intelligence, the idiot, does not develop speech at all. Imbeciles have very poor speech. Morons, as a class, have a disproportionate amount of faulty speech. McDowell's study on stutterers (49) showed that the group which she studied followed the usual curve for the distribution of intelligence, with I.Q.'s ranging from 63 to 156. If, as some believe, *stuttering* is usually the result of emotional disturbance and conflict, then, of course, it would be natural to expect more of it among those intelligences capable of emotional sensitivity. Statistics prove this to be true.

The question of intelligence in regard to speech defects raises some important correlative problems. One has to do with *speech correction.* The superintendent of a school once referred to the writer a boy who the superintendent thought should be excluded from school because of low mentality. The child was a few months past eight years of age and, from all reports, did not talk at all. It was discovered that the parents had recently taken the child to a highly reputable clinic in another city for examination. Not wishing to repeat all the physical and sensory examinations that are needed in such cases, the writer asked permission of the parents to write to the clinic for a full report before going further with the intelligence testing requested by the school. A lengthy report was promptly received. The physical examination had revealed nothing out of the ordinary. Hearing tests recorded, "No defect in either ear." The psychological examination report said, "Impossible to obtain an intelligence rating upon this child because he was uncoöperative." The very detailed report of the speech expert indicated a "failure to use the back part of the tongue" and some peculiarities of diaphragm action and breathing "which could be corrected by instruction at home and one or two office calls per week." Since report on intelligence seemed to be the one item lacking, the examination was undertaken. Several preschool tests were tried in which allowance could be made for the fact that the child was a non-talker and in which he would have an opportunity to demonstrate whether he understood what was said to him; how well he could use his hands; how he could correct his own errors; how he could judge size, shape, and position; and how he could deal with many other factors which are elements of intelligence. The child apparently enjoyed the experience and went along nicely on everything that was required of him within the limits of his ability. While it is not possible, or wise, to make an exact mathematical statement as regards amount of intelligence in such cases, it was nevertheless possible to get a usable measure of his development. By all counts, his intelligence was considerably less than the four and a half years stated in the law as necessary for doing the most rudimentary school work. The point at issue here is that, with hearing defects ruled out and an intelligence of less than four and a half years, methods of speech correction are not likely to be of any value. In all probability the back of the tongue and other speech organs were not functioning properly because of the same general retardation that was manifested in everything else the child did, even in his play activities. Speech lessons for this child, involving great expense and much mileage, would have been about as practical as use of an expensive motor truck to pull out of the mud a frail two-wheeled cart.

Delayed speech is another problem related to intelligence. Assuming that children of normal intelligence are, *as a rule,* saying a few words at the age of one year, or certainly by eighteen months, what are the possibilities of speech for a child who is not talking at three, four, five, or six years of age? It is perhaps safe to say that, as a rule, the chances of the development of anything like normal and adequate speech are about in inverse ratio to the amount of delay beyond two and a half or three years. Obviously, social, emotional, and physical factors may delay speech. If other members of the family are too alert in interpreting grunts and gestures, for example, speech may be slow in coming. Some studies have indicated that twins develop speech more slowly than single children because they have each other's immature speech to imitate. Sickness likewise may retard speech. Fright, shock, or embarrassment at first speech attempts may cause blocking of speech processes for a considerable time. Of course, as already indicated, deafness hinders or prevents speech. If all these causes have been ruled out, then delayed speech is probably the result of defective intelligence.

A child with low-grade intelligence has little to talk about and lacks the ability to bring into play the intricate coördination of organs necessary for speech. The mental age of the feeble-minded child more nearly determines the time for the appearance of speech than does his chronological age, although this cannot be entirely depended upon. It has been the writer's experience that a very defective young child does not even have the speech that one might expect of his *mental age*. That is to say, an eight-year-old mental defective with a mental age of four does not, in the writer's experience, talk nearly so well as a normal four-year-old with a mental age of four. Such cases are very difficult to diagnose and handle wisely. For one thing, it is often hard to get at the truth as to how much attempt at speech the child actually makes. The writer remembers a child referred by a social agency. The child was past four and all accounts from social workers, public health nurses, and neighbors were to the effect that the child had never been heard to speak a word. While he was in the clinic, he not only did not speak but he did not even articulate syllables. An occasional "uh" was the only sound he made. The mother's report was somewhat different. She admitted that most of the time the child did not talk at all and never had. However, she insisted that on a few occasions he had spoken *in sentences*. She declared that at the table a few days before he had said, "Give me some of that rice," and on a few other occasions had uttered whole sentences. In view of the intelligence of the child as displayed on all tests, it seems highly improbable that this account was accurate. Of course, it is always possible that the mother or other member of the family may understand the child when no one else does. It is also possible that the mother, by wishful thinking, may read more articulation into the vocalizations of the child than he intends himself. From homes of low intelligence, it is very difficult to get what one can be sure is a real account of the child's speech. The author remembers the case of a feeble-minded grandmother who once brought to the writer the illegitimate baby of her feeble-minded daughter. The daughter had been committed to a state institution for the feeble-minded; the child had been conceived while the girl was home from the institution on a visit to her mother. The grandmother had heard of a wealthy man and woman who had taken some foster children into their home, and she was anxious to have her grandchild placed there too. The child was little less than two years of age and made no articulate sounds whatever while in the examining room. When the grandmother was questioned about the child's development, her account was obviously boosted to meet the demands of the situation. She even insisted that the baby could talk, at least that he could say several words. When asked what the words were, she hesitated and then replied, "Oh, he says 'Daddy' as plain as anything." "Well, that is interesting. Whom does he call 'Daddy'?" she was asked, since there was no father in the family group. "Oh, he doesn't mean anybody in particular but *all* babies say 'Daddy,'" she replied. No doubt some parents really believe that such familiar words are "innate" rather than learned through appropriate experience.

Psychic mutism. This condition should perhaps be mentioned, although it is not often encountered in children (42). The writer recalls one very marked case. This child could talk, and did talk at home. She had, however, progressed as far as the fourth grade without any teacher's or any child's ever having heard her utter a word. She would write her lessons and was doing creditable work in school because she was being permitted to write everything. A few days before she was brought to the writer, something had happened in school that had caused the child to speak a word or two. Her speaking nearly disrupted the school. It was near lunchtime, and all the children in her room were so startled that they *ran* home shouting, "Lucy talked, Lucy talked!" Like so many interesting cases that professional workers often encounter, it was impossible to follow through on this case and to watch the course of subsequent developments. Psychic mutism is common enough among adult psychotics, but is quite rare among children except, perhaps, in occasional cases of more or less transitory mutism. *The Problem Child in School* (69) gives an interesting case of psychic mutism helped through the efforts of the visiting teacher. If the school does not have such services, a psychologist or psychiatrist should be consulted.

The tongue-tied child. Occasionally one sees a child whose tongue, because of too short a frenum, is tied to the floor of his mouth so near to the tip of his tongue that he has difficulty in pronouncing such words as tongue-tied, tattle, died, daddy, noon, gnaw. By experimentation, one can discover for himself the kind of speech produced under such conditions. The anomaly, however, is not frequent. Perhaps because it is obvious or because it can be corrected by a snip of surgical scissors, it has been assigned as the cause of every possible type of speech defect. There is no evidence whatever that it is the cause of stuttering. While the clipping of tongues is not in vogue, either among parents or physicians, as it once was, yet one still hears diagnoses of "tongue-tied" when there is absolutely no reason for such a pronouncement. A mother reported to the writer once that a child whom she was considering for adoption would "have to have his tongue clipped first" because the doctor had said he was tongue-tied. True, his speech was quite infantile but he was certainly *not* tongue-tied. He could touch the tip of his nose with his tongue and do anything else he was asked to do with the member. A case known to the writer was a partially deaf child who did not talk well, of course. The teacher in the school for the deaf reported that before the child entered their school he had already had his tongue clipped four times.

Lisping. Lisping is usually the result of faulty tongue placement and tongue action and is usually therefore rather easily corrected. If in early speech, however, lisping is condoned because it is "cute," it may continue into later life as a bad mental-hygiene hang-over. *Lateral lisping* in which the sound is emitted over one or both sides of the tongue usually rests upon a structural defect and is therefore less amenable to treatment.

Structural organic defects. Other organic defects which cause speech difficulties are quite common. Size or shape of tongue may be such as to interfere with correct speech. The uvula, which is a sort of pendulum hanging from the palate, may be too long or it may be bifurcated. The arch of the palate may be too high or may be "cleft." An extension of the latter condition through both the hard and the soft palate may even reach the lip and produce a cleft or "harelip". Some splendid work is being done now in supplying such children with excellent artificial palates (3, 4, 31, 85).

Dental deformities often have to be corrected by orthodontia, not only for aesthetic reasons but likewise for the improvement of speech. Obstructions and defects in the nose and throat are causal factors in some speech defects. Tonsils and adenoids are responsible for poor speech in many cases. In fact, any organ or structure involved in speech in any way may conceivably be imperfect enough to cause defective speech.

Stuttering. Stuttering is one of the most frequent as well as one of the most pitiable speech difficulties. Some authorities make no distinction between stuttering and stammering. Others do, but they do not all make the same distinction. Some speech experts prefer to call *stuttering* that condition in which the word is begun but the speaker repeats the initial sound over and over again. These experts reserve the word *stammering* for that condition in which there is blocking, a tightening of the muscles, straining, and utter inability to get the word started at all (55).

Stuttering is fairly common among children of three or four years of age who are still somewhat inexperienced in speech and who are perhaps thinking ahead of their speech. Most normal children, if living under good physical and mental hygiene, outgrow this difficulty. At about the time of entering school, another rise in incidence of stuttering occurs. Just why this should be so, one cannot say certainly. Some authorities, of whom we shall speak later, would have us believe that the attempts of the school to have all children write with the right hand are responsible at this point. Other investigators, whom likewise we shall discuss below, would say that the stuttering around six and seven is the result of the emotional strain put upon the child by his attempts to adjust to the more complex life he is then having to live. Around puberty, another rise in frequency of stuttering occurs. Several different explanations have been offered for this increase. Emotional disturbance again may be responsible. Thyroid imbalance has been suggested as a causal factor.

An article by Wendell Johnson tells of his experiences among the Bannock and Shoshone Indians in Idaho. He was looking for stuttering children to study and could find none. Interviews with teachers of long experience in the district revealed the fact that they had never known one of these children who stuttered. It even developed that the language of these Indian tribes had no word for *stutter* or *stuttering*. It will be very interesting to learn more about how these children acquire speech and how they all escape stuttering (40).

As already indicated, theories as to the causation of stuttering are numerous. One theory is that the stutterer does not have a clear image in his mind of the word he wishes to say and should be helped to get such an image (11, 12, 76). The psychoanalytic school explains stuttering as an emotional conflict which has been pushed into the "unconscious." The idea of the psychoanalysts is that a fear one will say an obscene word causes him to stutter. They would then say that the higher incidence of stuttering among males is because they have more obscene words in their suppressed speech. According to this theory, slips of the tongue are significant "complex" finders. Similarly, the fact that the child may stutter in the presence of only certain individuals is taken to indicate that these are the persons who are somehow connected with the emotion-producing situation. Some psychoanalysts say that stuttering is an indication that the individual has been "fixated" at the oral erotic level of development.

Still other theories of the cause of stuttering are strictly neurological in their approach to the question of etiology. Birth injuries and certain infectious diseases which produce neurological change, such authorities say, account for some cases of stuttering. Heredity likewise might pass on neurological or other structural defects. Obviously, it is very hard to separate the influence of heredity as such from the influence of other stuttering members of a family. Further evidences from electroencephalography as to brain-wave patterns in different members of the same family and in stutterers will probably throw more light on the role of heredity. Electroencephalography is already tending toward this explanation of stuttering (28).

The most frequent neurological factor in producing stuttering, such authorities as Travis (78) and Orton (56) claim, is a reduction in "cortical lead control." Studies in neurology have demonstrated that the principal centers for speech lie on the *dominant side* of the brain—that is, the left side of the brain in right-handed individuals, and the right side of the brain in left-handed ones. Incomplete dominance of one side over the other, or an attempt to change dominance (as in forcing a left-handed child to use his right hand) will cause stuttering, according to this theory. "In the stutterer, instead of nervous energy being mobilized by one center of greatest potential, it is mobilized by two centers of comparable potential," says Travis (78).

Here again, electroencephalography has much to contribute. The reader will find evidence for the cortical dominance theory in Douglas (21), Freestone (24), Freestone (25), Greene and Small (28), Knott and Tjossem (43), and Rheinberger, Karlin, and Berman (59).

Still another explanation of the cause of stuttering might be called the mental-hygiene theory or the personality theory. Stuttering, according to this point of view, is an evidence of a personality disorder involving social maladjustment (9, 10, 23). Relief from emotional tension is the recommended therapy.

The use of the Rorschach ink-blot test has definitely shown personality differences between stutterers and non-stutterers that would lend evidence to the role of emotions in the production of stuttering (51, 60). Of the recent studies examined by the writer, Scarbrough (70) is the only investigator who does not find much difference between stutterers and non-stutterers.

Regardless of the degree of truth in any of the other theories as regards etiology, no one can gainsay the fact that disturbed emotions play an important role in the life of the stutterer. The writer has a friend who at one time did speech-correction work in the schools of an underprivileged section of a large city. This district had, over a short period of time, a great number of community tragedies—a gas tank explosion, murders, floods, and other calamities. The speech-correction teacher often remarked that, if the morning paper contained an account of another disaster in her district, she could be sure that the classroom teachers would be sending back to her for more remedial work presumably benefited stutterers who had resumed regular class work after training.

It is interesting to note that cures have been reported as having been brought about by the methods appropriate for each of the above theories. Techniques guaranteeing permanent cure are numerous. One method recommended by Knight Dunlap is to have the stutterer deliberately practice stuttering. The principle seems to be to have the speaker develop the idea that his speech—stuttering or normal—is voluntary on his part. This method has not had wide acceptance (6).

It is not in place to attempt here an evaluation of these theories. As a matter of fact, if one wants to be realistic about the matter, he must admit that the percentage of permanent cures of stuttering is not gratifyingly high by any method. One thing that recommends the mental-hygiene approach to many psychologists is the fact that it is *still* good, even if some one or more of the other theories should later receive absolute confirmation. So much cannot be said for some of the other theories. For example, if cortical dominance is *not* the cause of stuttering, then the procedure of changing the hand-use of every stutterer to the hand which he has not been using would surely be the wrong thing to do. And from the mental-hygiene point of view such a measure would only be pouring oil on the fire. Furthermore, if the personality-disturbance theory is true, then much of what is otherwise recommended in the way of practice exercises in speech may likewise be very bad indeed because of the attention thus called to the defect. For further discussion on these theories one should consult references 3, 8, 23, 34, 41, 42, 46, 56, 71, 81, 82, as well as the entire January, 1943, issue of *The Nervous Child,* which is given over to discussions of different aspects of stuttering in children.

Other difficulties of expression. We should perhaps mention a few other difficulties which children encounter in their attempts to express themselves. So-called mirror writing has been mentioned in Chapter XVI. It has been written up so often in the newspapers that one might almost be led to think it is a new malady of some sort. On the contrary, it is probably as old as any of the difficulties that accompany writing or reading. Mirror writing is a form of writing backward in which the product can be read only from its image in the mirror. The exact cause or causes which bring about the condition are still in doubt (17). Left-handedness figures prominently in mirror writing. Indeed, Scheidemann (71) says, "Not a single case of a right-handed mirror writer has yet been found", unless it be some right-handed individuals who *learned* the rather difficult feat. Mirror writers have been found to possess intelligence of all degrees, ranging from defectiveness to precocity. The majority, however, seem to be of the lower grades of intelligence. Teachers who encounter mirror-writing children should perhaps not undertake remedial work until study of the case has been made by a psychologist and remedial measures have been recommended. Scheidemann (71), Louttit (46), and Carmichael (17) discuss treatment possibilities.

The bilingual child. There has been much discussion in writings of the last few years about the psychological and educational advantages and disadvantages of subjecting young children to two languages at the same time. Many of our foreign-born and second-generation children are cases in point. Formerly it was thought that, for the sake of ease of acquiring correct pronunciation, if for no other reason, a second or third language should be begun as early as possible. Private schools have usually taught foreign languages much earlier in the grades than public schools, which have not as a rule taken up foreign language before the ninth grade. Some private schools are now seriously questioning whether the policy is wise; others are postponing the introduction of a second language until much later than formerly. The controversial question is not whether a child who speaks one language and who suddenly finds himself in a situation where only some other language is spoken will have difficulty in understanding what is going on about him. The question is rather more subtle than that—namely, whether children may not be seriously handicapped in their *thinking processes* if, for example, the same person addresses them in two different languages, or if they themselves have to think in two different languages. Some studies have indicated that many European children who are reared in border countries and learn two or more languages simultaneously suffer thought confusion. Some studies of bilingualism in this country have led to the same conclusion. On the other hand, some investigators claim that they find no evidence of any handicap caused by bilingualism. In the present state of confusion in the literature, it appears that no generalization can be made as to the effects of bilingualism. The subject is important enough to be regularly reviewed in the *Review of Educational Research,* the current one being by Tireman (77).

Service of the professional worker for children with speech defects. Probably the largest part of the service the professional worker can render for children with speech defects is to provide for the child fine physical and mental hygiene insofar as possible. This is fundamental to all remedial work of any kind. It may include having an analysis made of the child's diet. It may also require that examination, treatment, or operation be secured where there are structural deformities. On the side of mental hygiene, it will involve reducing emotional strain as much as possible. Explanation to the family, to the teacher, or to playmates may secure coöperation from those quarters and thus reduce tension.

As for remedial work for specific speech defects, the writer must confess that she has grave doubts as to the extent to which this should be undertaken by anyone other than an expert. However, references 3, 4, 29, 34, 62, 65, 66, 78, and 79 may be read for suggestions for those who are interested in remedial measures. There is a real question as to whether the suggested exercises, games, and treatment plans mentioned in these sources should be undertaken by the classroom teacher or the professional worker, unless it be under the guidance of an expert. Particularly would this seem to be true in the case of stuttering children. Good mental-hygiene principles would dictate that we do everything in our power to make the child feel comfortable; that we let him know we are interested in him; that we read or speak with him; that we will not ask him to recite in class on something on which he is totally unprepared; in short, that we will do everything in our power to reduce his strain. The danger is that, if we go much beyond this point with specific remedial exercises, we may only center the child's attention more than ever upon his defect. If such measures are to be undertaken at all, it would seem better to have them done by an expert. Not only is he qualified for such work, but also he is not a part of the classroom or social situation to which the child must go back and try to adjust. It is to be hoped that the day will soon come when schools will have many more speech-correction experts. Some smaller communities are now working out a scheme by which a few such teachers can travel about from one locality to another and give service to children in several schools.

The Left-Handed Child

Left-handedness. As for the left-handed child about whom we have already spoken, another word may be in order. We do not need to wait for final proof or refutation of the cortical dominance theory of the etiology of stuttering to know certain things. We know, for instance, that left-handedness differs in amount from one individual to another. Psychological clinics have ways of determining innate preference for the use of one hand or the other. This is true also in regard to right- or left-eyedness or -footedness. The child who is only slightly left-handed may safely be asked to use his right hand if he gives no evidence of disturbance or irritation in so doing. If we find we cannot ask him to change without friction and torment to him, certainly we had better not do it. As a matter of fact, left-handedness is probably not the handicap in any case that most people consider it to be. The dining table is one of the places where the left-handed person causes the most annoyance to others, but probably most left-handed persons could be taught to drink from a cup placed on their right side. If it is evident that a child *persistently* uses his left hand for nearly every manual activity and this in spite of kindly reminders and suggestions to use his other hand, it would seem very doubtful whether we should not give up and allow him to remain left-handed. In such cases, the change, if possible at all, would be brought about at too great a cost from the mental-hygiene point of view (6, 19, 30, 61). Certainly many children have been made most uncomfortable by ill-advised adult efforts to change left-handedness. This emotional strain could conceivably produce stuttering, even if change of handedness *per se* did not.

Crippled and Deformed Children

The size of the problem. A crippled child, according to a definition adopted by the White House Conference (83), is "one whose future capacity for self-support is threatened by disease or defect of the bones, joints, or muscles." The number of children so afflicted was estimated to be 300,000. From the standpoint of mental hygiene and feelings of inferiority, sensitivity, seclusiveness, and "psychology of being different," we might add to the list of crippled children all those who have deformities or disfigurements that produce emotional hazards. The figure would then be enormous. True, many of the latter children do not demand particular types of education, nor do they require long and painful surgical or medical treatment. However, in considering the service that teachers, social workers, or nurses can render to children, we must not lose sight of the child with the deformed back, the club foot, the club hand, the deformed or missing hand, the amputated leg, the harelip, or, for that matter, even the child with the birthmark, the bat-wing ears, or the unusually large mouth. Any physical feature, if actually different or believed to be different from the features of other people, may be a source of great suffering to a child. This matter has been touched upon in previous chapters. It may be well to reiterate at this point that a child who believes himself to be physically different *may* be emotionally disturbed thereby, but that not all "different" children are so disturbed. The latter half of this truth is probably just as important for us to keep in mind as the former, since it suggests that we may have a share in preventing bad mental hygiene (2, 18, 67).

Causes of crippleness. Dyskinesia, or impairment of voluntary movement, may result from a variety of causes. Among the most common etiological factors are acute anterior poliomyelitis (infantile paralysis), tuberculosis of bones and joints, cerebral palsy, congenital dislocation of the hip, osteomyelitis (inflammation involving the marrow of the bone), rachitic deformities (those caused by rickets), arthritis, congenital deformities of hands or feet, spinal curvatures, and improperly cared for fractures. A few of these we must discuss briefly (1, 48, 54, 73, 74).

Cerebral palsy. Medical and psychological reports contain so many references using so many different diagnostic terms in describing the child with cerebral palsy that it is important to have some familiarity with these matters. The condition is also known as *Little's Disease* and as *spastic paralysis,* and the afflicted child is sometimes spoken of as "a spastic." Lord and Crothers (45) have written a book that all professional workers should read. We shall adopt for our purposes their terminology. The condition, they say, is a "disturbance of motor function due to damage to the brain before, during, or shortly after delivery of the infant." The accompanying rigidity of muscles and heightened tendon reflexes may involve only one limb, in which case the condition is known as *monoplegia.* When both the arm and leg on one side are involved, the term *hemiplegia* is used; and when both arms and legs, *diplegia* or *tetraplegia* or *quadriplegia;* when only the lower limbs, *paraplegia.* Lord and Crothers say that a few cases are "unquestionably hereditary in nature" (see author's experience in this respect in Chapter II); more are due to disease of the mother or to birth injuries; and some arise from hemorrhage within the cranial cavity shortly after birth. Still another group of cerebral palsies are "due to known accident or infection or degenerative disease" during the first few days of life. The "scissors gait" of children severely afflicted with cerebral palsy is caused by the fact that one foot or leg passes in front of the other one, thus producing a cross-legged progression. Involvements of the arms are common also. Speech defects, eye difficulties, and drooling are common accompaniments. There may be serious mental subnormality as well. Behavior disorders likewise may result from the brain injury in such cases (72). Therapeutic, educational, and psychological problems connected with cerebral paralysis have much in common with similar questions concerning other conditions of crippleness. These matters will be discussed below (7; 14, 15, 16, 20, 22, 45, 46, 64, 71, 72).

Poliomyelitis. To realize that the name *infant paralysis* is an incorrect term, we need only note that no age is exempt from attack. Acute poliomyelitis is an infectious disease that is common in the summer months. It occurs both epidemically and sporadically. The exact etiological factor is not known, although it is recognized to be a filterable virus. Many attacks are so mild as to go unrecognized and undiagnosed. The onset of the disease is usually abrupt, although the case may appear to be mild. The child is usually drowsy, feverish, and suffers from upset stomach and intestines. There are likely to be twitchings in the muscles and uncertainty of movement. Doctors often note an anxious expression on the child's face. Stiffness of the neck and spinal column is characteristic, although by no means confined to this disease. Early recognition of these symptoms, or even suspicion of them, is most important. Nerve cells in the spinal cord responsible for the movement of certain muscles are attacked. Treatment, obviously, must be given before these nerve cells are destroyed if muscle use is to be saved. Legs are most often affected, although arms, back, and hips may be injured also. The paralysis is flaccid, not spastic. Mental deterioration is not produced (13, 27). Early diagnosis and treatment are of extreme importance.

Erb's paralysis. Erb's paralysis, sometimes spoken of as *birth palsy,* affects various muscles of the arm and chest and shoulder.

Treatment of crippled children. *Orthopedics,* which has to do with the treatment and correction of deformities and diseases of joints, bones, and muscles, comes from two Greek words meaning *straight* and *child.* While not confined to the care of children, orthopedics does straighten, at least partially, many children who otherwise would be terribly deformed and helpless. Physiotherapy (that is, treatment by non-medical means) makes use of heat, water, massage, exercise, rest, radiation, electricity, and occupational therapy. The last few years have seen wonderful improvements in training for afflicted muscles. Obviously, it is difficult to give prolonged exercise treatment to little children who do not understand the value of muscle-training (39). The study by Lord and Crothers (45) mentioned above gives fascinating accounts of devices used to acquaint children with the "feel" of relaxed muscles. Games, demonstration by the use of a huge Raggedy Ann doll, and exercises are described. Rogers and Thomas (64), Fischel (22), and Boorstein (14) give suggestions that are valuable for anyone having to do with crippled children. The struggles of a spastic girl and her mother so that the child might receive treatment and education are dramatically told in *The Broken String* (35).

Intelligence of crippled children. Because the possibility of impairment of intelligence differs so from one disease entity to another, it is impossible to generalize on the intelligence of crippled children. Some of the etiological factors are associated with possible intellectual deterioration and others are not. Furthermore, as was seen to be the case in children with sensory defects, intelligence-testing is a difficult matter. Where children have long been deprived of the use of voluntary muscles or where they may never have had normal opportunities for exploration and investigation of their environment, psychological examination is very difficult. Lord and Crothers (45) give an interesting discussion of possible adaptations of testing techniques for use with crippled children. The interpretation of "mental age" in the case of a crippled child must be made with reservations. Teachers are likely to judge crippled children as being brighter than they are. For one thing, sympathy sometimes distorts judgment. (Unfortunately prejudice and distaste do too!) The crippled child is likely to have been out of school a great deal. He may be older than his academic competitors and will therefore have a spurious advantage at some points. There is, of course, a chance that the crippled child may be small for his age and for this reason appear brighter than he really is.

Education of crippled children. As for education, our usual maximum holds—namely, education with normal children as far as is possible (1, 33, 38, 48, 50, 53, 54, 73, 74, 80, 84). Many cities now have provisions in the public school system for the education of crippled children. Some such schools have certain types of movable seats, and use ramps and elevators instead of stairs. Some schools, however, prefer to use wheel chairs for the most incapacitated children, and to accustom all others to use stairs and other equipment such as they will have to use in the world outside.

Many cities provide teachers for the home-bound child who cannot get to school. While such a child does not have the benefit of mingling with other children, nevertheless the mere act of learning something tends to prevent feelings of inferiority. The attitude of the other members of the family toward a crippled child sometimes changes happily as they see the child learning to read and write and do arithmetic.

For crippled children who are in need of daily treatment, a hospital or other institution seems to be indicated. It is at this point that an important question arises. Most such training or industrial schools for crippled children require a certain degree of intelligence for admission. This criterion sometimes works a hardship when it excludes from treatment a child of low intelligence. Looked at in another way, the provision seems very wise. For one thing, *coöperation* in muscle training and rehabilitation requires a certain degree of intelligence. Furthermore, most schools for crippled children have a distinct vocational or industrial slant. Since such care, treatment, and training are, of course, very expensive, there is probably a social justice in reserving them for children who can profit to the point of becoming wholly or partially self-supporting (32). This does not mean, of course, that *treatment* should not be available to all crippled children. It probably is available if professional workers are fully aware of community resources. The International Society for Crippled Children mentioned below should always be consulted when doubt arises.

Whether the education of the crippled child be in the public schools, in his own home, or in an institution, there are certain problems to be met. Academic education must always be made to play into the hands of the therapeutic program. Specific muscle handicaps often make necessary particular arrangements of the curriculum. In the case of certain difficulties, such as cerebral palsy cases, there are unique difficulties. The cerebral-palsy case tires easily and varies greatly in his ability from one day to another.

The service of the professional worker. In addition to the matters already mentioned, in which the visiting teacher, the teacher of the home-bound child, the nurse, or the social worker can be of assistance, there are certain points that we should all consider (36, 37, 58, 63). A friend of the writer, who is superintendent of a home for crippled children, often remarks that crippled children are very likely either to have too much or too little done for them. On the one hand, there is the neglected cripple who will have nothing done for him unless a professional worker outside his family initiates therapeutic measures. On the other hand, there is the crippled child who has too much done for him, who is not allowed to grow up physically or emotionally, or is led to believe that the world will step aside to let him go by. It is hard to tell whether the physical deprivation of the former or the soul-warping of the latter is worse. Psychological service for the family may help parents see that their crippled child needs growth in independence and self-reliance just as he needs body growth. The child needs help lest he develop a "cripple" psychology (35). Many parents, likewise, need much help from the social worker or nurse in understanding the possibilities and the limitations of treatment. Prevention and *early* treatment are sometimes made possible only by the professional worker. Most, if not all, of the references on crippled children mentioned at the end of this chapter will be of help to the parents of crippled children or to the worker who must work with the parents.

Fortunately, there is much service available for the crippled child. He has always been an object of our sympathy, and *Tiny Tim* is his symbol. Many service clubs have care and treatment of crippled children as a part of their program. In a number of cities, the Shriners have established either orthopedic hospitals or orthopedic units in general hospitals. Many states have plans for the care of crippled children, including children in rural districts. Most large city hospitals not only have arrangements for long-time treatment of crippled children, but also have provisions for educating the child while he is in the hospital. One issue per year of the *Journal of the American Medical Association* is devoted to hospital service and gives valuable help in securing aid for children in need of treatment or operation. Aid in planning recreation for crippled children is given by the Girl Scouts and the Boy Scouts. The International Society for Crippled Children, with headquarters in Elyria, Ohio, should be known to and by all professional workers who meet problems of crippled children.

Concluding Remarks

Throughout our entire discussion, we have had much to say regarding health. Perhaps even more should have been said. Provisions for health and safety and for the education and the vocational guidance that are appropriate for children with physical handicaps are the concern of all professional workers. The visiting teacher, public health nurse, or social worker is in a unique position to help bring about some of the safeguards for childhood provided by the Children's Charter (83):[1]

> V. For every child health protection from birth through adolescence, including: periodical health examinations and, where needed, care of specialists and hospital treatment; regular dental examinations and care of the teeth; protective and preventive measures against communicable diseases; the insuring of pure food, pure milk, and pure water
>
> VI. For every child from birth through adolescence, promotion of health, including health instruction and a health program, wholesome physical and mental recreation, with teachers and leaders adequately trained
>
> IX. For every child a community which recognizes and plans for his needs, protects him against physical dangers, moral hazards, and disease; provides him with safe and wholesome places for play and recreation; and makes provision for his cultural and social needs
>
> X. For every child an education which, through the discovery and development of his individual abilities, prepares him for life; and through training and vocational guidance prepares him for a living which will yield him the maximum of satisfaction
>
> XII. For every child education for safety and protection against accidents to which modern conditions subject him—those to which he is directly exposed and those which, through loss or maiming of his parents, affect him indirectly
>
> XIII. For every child who is blind, deaf, crippled, or otherwise physically handicapped, and for the child who is mentally handicapped, such measures as will early discover and diagnose his handicap, provide care and treatment, and so train him that he may become an asset to society rather than a liability. Expenses of these services should be borne publicly where they cannot be privately met

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THE CHILDREN'S CHARTER[1]

President Hoover's White House Conference on Child Health and Protection, Recognizing the Rights of the Child as the First Rights of Citizenship, Pledges Itself to These Aims for the Children of America.

I. For every child spiritual and moral training to help him to stand firm under the pressure of life

II. For every child understanding and the guarding of his personality as his most precious right

III. For every child a home and that love and security which a home provides; and for that child who must receive foster care, the nearest substitute for his own home

IV. For every child full preparation for his birth, his mother receiving prenatal, natal, and postnatal care; and the establishment of such protective measures as will make childbearing safer

V. For every child health protection from birth through adolescence, including: periodical health examinations and, where needed, care of specialists and hospital treatment; regular dental examinations and care of the teeth; protective and preventive measures against communicable diseases; the insuring of pure food, pure milk, and pure water

VI. For every child from birth through adolescence, promotion of health, including health instruction and a health program, wholesome physical and mental recreation, with teachers and leaders adequately trained

VII. For every child a dwelling-place safe, sanitary, and wholesome, with reasonable provisions for privacy; free from conditions which tend to thwart his development; and a home environment harmonious and enriching

VIII. For every child a school which is safe from hazards, sanitary, properly equipped, lighted, and ventilated. For younger children nursery schools and kindergartens to supplement home care

---

[1] From *White House Conference 1930, Addresses and Abstracts of Committee Reports,* by permission of D. Appleton-Century Co., publishers.

IX. For every child a community which recognizes and plans for his needs, protects him against physical dangers, moral hazards, and disease; provides him with safe and wholesome places for play and recreation; and makes provision for his cultural and social needs

X. For every child an education which, through the discovery and development of his individual abilities, prepares him for life; and through training and vocational guidance prepares him for a living which will yield him the maximum of satisfaction

XI. For every child such teaching and training as will prepare him for successful parenthood, home-making, and the rights of citizenship; and, for parents, supplementary training to fit them to deal wisely with the problems of parenthood

XII. For every child education for safety and protection against accidents to which modern conditions subject him—those to which he is directly exposed and those which, through loss or maiming of his parents, affect him indirectly

XIII. For every child who is blind, deaf, crippled, or otherwise physically handicapped, and for the child who is mentally handicapped, such measures as will early discover and diagnose his handicap, provide care and treatment, and so train him that he may become an asset to society rather than a liability. Expenses of these services should be borne publicly where they cannot be privately met

XIV. For every child who is in conflict with society the right to be dealt with intelligently as society's charge, not society's outcast; with the home, the school, the church, the court and the institution when needed, shaped to return him whenever possible to the normal stream of life

XV. For every child the right to grow up in a family with an adequate standard of living and the security of a stable income as the surest safeguard against social handicaps

XVI. For every child protection against labor that stunts growth, either physical or mental, that limits education, that deprives children of the right of comradeship, of play, and of joy

XVII. For every rural child as satisfactory schooling and health services as for the city child, and an extension to rural families of social, recreational, and cultural facilities

XVIII. To supplement the home and the school in the training of youth, and to return to them those interests of which modern life tends to cheat children, every stimulation and encouragement should be given to the extension and development of the voluntary youth organizations

XIX. To make everywhere available these minimum protections of the health and welfare of children, there should be a district, county, or community organization for health, education, and welfare, with full-time officials, coördinating with a state-wide program which will be responsive to a nation-wide service of general information, statistics, and scientific research. This should include:

(a) Trained, full-time public health officials, with public health nurses, sanitary inspection, and laboratory workers

(b) Available hospital beds

(c) Full-time public welfare service for the relief, aid, and guidance of children in special need due to poverty, misfortune, or behavior difficulties, and for the protection of children from abuse, neglect, exploitation, or moral hazard

For Every Child These Rights, Regardless of Race, or Color, or Situation, Wherever He May Live Under the Protection of the American Flag.

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